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Kaisu Mälkki

THEORIZING THE NATURE OF REFLECTION

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Abstract

For the past decades reflection has been the buzzword of adult and higher education. Reflection is facilitated in many practices and there is abundant research on the issue. Despite the popularity of the concept, the reasons why bringing about reflection in educational practices is difficult remain unclear. The prevailing theories inform of the process in its ideal form. However, to a great extent, they fail to offer conceptual tools for understanding and working with the actualities of reflection.

The aim of the doctoral thesis was to explore the challenges and prerequisites of reflection in order to theorize the nature of reflection. By the term reflection it is here referred to becoming aware of and questioning the assumptions that orient our thinking, feelings, and actions.

The doctoral thesis consists of five studies that approach these questions from different viewpoints and within different contexts. The methods involve both a philosophical and an empirical approach. This multifaceted approach embodies the aim of both gaining a more thorough grasp of the phenomenon and to develop the methodology of researching reflection.

The theory building is based on conceptual analysis and rational reconstruction (see Davia 1998; Habermas 1979; Rorty 1984) of Mezirow's (1981; 1991; 2000; 2009) theory of transformative learning. In order to explore the aspects which, based on the analysis, appeared insufficiently considered within Mezirow's theory, Damasio's (1994; 1999; 2003; 2010) neurological theory on emotions and consciousness as well as Clausewitz's (1985) view on friction are used as complementary theories. Empirical analyses are used in dialogue with the theoretical approach in order to challenge and refine the emerging theorization.

Reflection is examined in three different contexts; regarding university teachers' pedagogical growth, involuntarily childless women recovering from a life-event crisis, and soldiers preparing to act in chaotic situations of the battlefield as well as recovering from it. The choice of these contexts is based on Mezirow's notion of disorienting dilemma as a trigger for reflection. This notion indicates that reflection may more naturally emerge in association to life-event crises or other cumulative sets of instances, which bring our worldview and beliefs under question. Nevertheless, reflection is often being promoted in educational contexts in which the trigger conditions may not readily prevail. These contextual issues as

well as the differences between the facilitated and non-facilitated contexts have not, however, been considered in detail within the research on reflection (or transformative learning).

The doctoral thesis offers a new perspective into reflection which, as a further development on Mezirow's transformative learning theory, theorizes the nature of reflection. The developed theory explicates the prerequisites and challenges to reflection. The theory suggests that the challenges of reflection are fundamentally connected to the way the biological life-support system affects our thinking through emotions. While depicting the mechanisms that function as a counterforce to reflection, the developed theory also opens a perspective for considering possibilities for carrying out reflection, and suggests ways to locate and deal with the assumptions to be reflected on.

The basic dynamic of the challenges to reflection was explicated by conceptually bridging the gap between Mezirow's and Damasio's theories, through exploring the connections between the meaning perspective and the biological functions of emotions. The concepts of comfort zone and edge-emotions were formed so as to depict the emotional orientation of our thinking, as part of the explanation of the nature of reflection.

Keywords: reflection, emotion, adult learning, theory development, theory of transformative learning

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REFLEKTION LÄHTÖKOHDAT: TEORIAN RAKENTAMINEN

Tiivistelmä

Väitöstutkimuksessani tarkastelen reflektion (so. tulkintojamme, toimintaamme ja tunteitamme suuntaavien oletusten tiedostamisen ja uudelleenarvioimisen) haasteita ja edellytyksiä, ja kehitelen reflektion teoriaa erityisesti koskien reflektion luonnetta ja dynamiikkaa. Keskeistä tässä oli huomioida sekä reflektion kognitiivinen, emotionaalinen että sosiaalinen ulottuvuus ja erityisesti näiden keskinäinen vuorovaikutus, täydentäen näin aiempien teorioiden kognitiivisesti painottunutta näkökulmaa.

Viimeisten vuosikymmenien aikana reflektiosta on tullut yksi aikuiskasvatustieteen ja yliopistopedagogiikan muotitermeistä. Reflektiota edistetään monissa koulutuksissa ja sitä on tutkittu paljon. Tästä huolimatta on epäselvää, miksi reflektion aikaansaaminen koulutuksissa on kovin vaikeaa – monesti koulutuksissa tavoitellaan reflektion avulla melko syvällisiä tiedostamis- ja muutosprosesseja, vaikka usein lopputuloksena on lähinnä yleistä pohdintaa käsillä olevien asioiden tiimoilta. Aikuisen oppimisen teoriat kuvaavat reflektion ideaaleja, mutta eivät tarjoa juurikaan käsitteellisiä välineitä ymmärtää reflektion realiteetteja, käytännön haasteita ja edellytyksiä. Lisäksi olemassa olevat teoretisoinnit ovat kognitiivisesti painottuneita, ja jättävät reflektion emotionaaliset ja sosiaaliset ulottuvuudet riittämättömälle huomiolle.

Tutkimus koostuu viidestä osatutkimuksesta, jotka tarkastelevat tutkimuskysymyksiä eri näkökulmista ja eri konteksteissa. Osatutkimuksista kaksi pohjautuu haastatteluaineistojen laadulliseen analyysiin, ja kolme teoreettisiin analyysihin. Tämän monitahoisen tutkimusasetelman myötä pyrkimykseni oli yhtäältä tavoittaa reflektion luonnetta kokonaisvaltaisemmin, ja toisaalta kehitellä reflektion tutkimisen metodologiaa.

Eri kontekstien valinta perustui Mezirowin näkemykseen reflektion laukaisijasta (engl. "disorienting dilemma"): Mezirowin mukaan reflektio käynnistyy usein sellaisten arjen kokemusten pohjalta, jotka saattavat aiemmin itsestään selvinä pitämämme oletukset kyseenalaisiksi. Konkreettisin muoto tällaisesta kokemuksesta on elämässä kohdattu kriisi, joka pysäyttää ja herättää miettimään asioita uudessa valossa. Reflektiota pyritään sen sijaan usein edistämään erilaisissa aikuiskoulutuksissa, huomioimatta sitä onko osallistujilla tällaisia reflektiota laukaisevia kokemuksia. Näitä kontekstien eroihin liittyviä seikkoja ei kuitenkaan

ole reflektiota (ja transformatiivisen oppimisen teoriaa) koskevissa tutkimuksissa tarkasteltu. Tämän vuoksi halusin tarkastella reflektiota sekä siellä missä sitä luonnollisemmin esiintyy (kriisissä) että sellaisessa kontekstissa, jossa sitä pyritään edistämään (koulutukset). Vaikka osatutkimuksissa käsitellään reflektiota tiettyjen kontekstien puitteissa, analyyseissä pyrkimykseni oli fokusoida teoreettisesti relevantteihin yleisempiin kysymyksiin liittyen reflektion eri puoliin, seurauksiin ja haasteisiin.

Teorian kehittelyn lähtökohtana oli Mezirowin (1981; 1991; 2000; 2009) transformatiivisen oppimisen teorian käsiteanalyysi ja rationaalinen rekonstruktio (ks. Davia 1998; Habermas 1979; Rorty 1984). Tarkastellakseni niitä reflektion ulottuvuuksia, jotka analyysin pohjalta osoittautuivat Mezirowin teoriassa riittämättömästi käsitteellistetyiksi, hyödynsin täydentävänä teoriana Damasion (1994;1999; 2003; 2010) neurobiologista teoriaa emootioista ja tietoisuudesta. Näiden kahden teorian analyyseihin pohjautuen rakensin uutta käsitteistöä. Empiirisiä osatutkimuksia hyödynsin teoreettisten analyyysien ohella teoretisoinnin haastamiseen ja rikastamiseen.

Tutkimuksessa kehitetty teoria tarjoaa uuden näkökulman reflektioon ja käsitteellistää reflektion luonnetta ja dynamiikkaa. Sen avulla on mahdollista tarkastella reflektion haasteita sekä reflektion toteuttamisen mahdollisuuksia erilaisissa konteksteissa.

Avainsanat: reflektio, emootiot, aikuisen oppiminen, teoriankehittely, transformatiivisen oppimisen teoria

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At home in Vantaa, on May the 8th, 2011.

Kaisu Mälkki

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1 INTRODUCTION

Overview of the practice and research on reflection in adult and higher education

During the past decades, the concept of reflection¹ has become popular within higher and adult education (see e.g. Beard & Wilson, 2006; Brookfield, 2000; Gur-Ze'ev, Masschelein & Blake, 2001; Hammersley-Fletcher & Orsmond, 2005; Kreber, 2005; 2006; Procee, 2006; Sparks-Langer & Colton, 1991). This may be seen to be no wonder, as the promises attached to the concept are multi-faceted and profound: reflection is regarded as an essential element in the development of the expertise and higher order thinking skills for professionals and university students alike (see e.g. Brookfield, 2006; Collin & Tynjälä, 2003; Fisher, 2003; Ottesen, 2007; Schön, 1983; Tynjälä, 2007). It is also claimed that reflection, as a prerequisite of both quality teaching and the professional development of a teacher, plays a part in the scholarship of teaching. (see e.g. Biggs, 2003; Bleakley, 1999; Boud & Walker, 1998; Brookfield, 1995; 2006; Cranton & Carusetta, 2004; Entwistle & Walker, 2000; Kreber, 2005; McAlpine et al., 1999; Ottesen, 2007; Postareff, 2007). More generally, reflection has been argued to be at the core of adult learning, transformation and empowerment (see e.g. Dewey, 1933; Kolb, 1984; Illeris, 2007; Mezirow, 1991; 2000; 2009).

Reflection is being widely facilitated in different educational settings. However, it is not often evident what is actually gained through these efforts. There are scholars who maintain that promoting reflection is not easy, in contrast to the optimistic rhetoric surrounding the concept. Some empirical studies question the possibility of successful application of the ideals in practice. Moreover, some researchers claim that many educational programs aiming to foster reflection within the frame of differing learning objectives in fact only bring about general pondering with regard to the theme in question. (see Bleakley, 1999; Brookfield, 1994; Ecclestone, 1996; Järvinen, 1990; Kreber, 2004; McAlpine et al., 1999; Procee, 2006; Taylor, 2007.) As a consequence, some scholars question the prevailing popularity of the notion to the extent that they claim reflection is only a pedagogic mantra devoid of content (see e.g. Ecclestone, 1996; Procee, 2006); in other words, they criticize the practical applications of reflection for being superficial. Taking this criticism of superficiality into account, the situation becomes paradoxical, as the promoters of reflection justify their practices especially with a view to the profoundness of the benefits that reflection may bring in its wake.

¹ Etymologically, reflection refers to “a bending back,” from L. *reflex-*, pp. stem of *reflectere*, from re- “back” + *flectere* “to bend.” The meaning “remark made after turning back one’s thought on some subject” dates back to the 1650s.

From a research point of view, the case for reflection is no less ambiguous. Criticism has been aimed at the different aspects of research stemming from the current trend of overemphasizing educational applications within the scholarly discussions on reflection (see also Beard & Wilson, 2006). At the same time, the efforts to increase understanding of the phenomenon in a methodologically rigorous manner – as a basis for applications – have been considerably smaller. This is due to the emphasis of educational research being placed on its practical nature, in the sense that it aims to inform educational practice of ideal outcomes and what the practices at their best could achieve, rather than research representing what actually takes place in these contexts (Peltonen, 2009). The criticism concerning the prevailing research on reflection may be summarized in the following points:

First, according to some scholars, the appeal of the notion of reflection has created a trend where reflection is unquestioningly taken as a research-based hallmark of modern education. At the same time, the meaning of the concept, as well as the theoretical bases, prerequisites and ethical issues, are largely left unexamined. This inconsistency has been noted within scholarly discussions, and a critical analysis of the concept of reflection has been repeatedly called for (see e.g. Bleakley, 1999; Boud & Walker, 1998; Brookfield, 1994; Ecclestone, 1996; Illeris, 2004; Procee, 2007; Taylor, 1997).

Second, the empirical studies on reflection have also been criticized for not explicating the theoretical and philosophical bases, and it has been claimed many of the studies miss the core attributes of reflection in the first place (see Bleakley, 1999; Fisher, 2003; Hatton & Smith, 1995; Kreber, 2004; McAlpine et al., 1999; Procee, 2006). Examining and explicating the theoretical, philosophical and methodological bases on reflection is important, in order to reach the meaning of the concept. If the concept is considered detached from its theoretical bases, its meaning becomes thinned down (see also Bacharach, 1989).²

Third, despite the abundant scholarly discussion and studies on reflection, few studies have focused on the development of theory in terms of reflection on education. For example, the widely cited theorizations by Dewey (1933) Kolb (1984), Mezirow (1991; 2000) and Schön (1983) have been criticized for overemphasizing the cognitive and rational aspects of learning, or for not sufficiently explicating the conceptual connections within the theory. Nevertheless, these theories have not been developed further in these terms. (see Clark & Wilson, 1991; Hatton & Smith,

² In terms of the concept of reflection, the theoretical bases may be seen to be necessary to consider in order to access the original meaning of the concept. Without explicating these conceptual roots, the concept may turn into a thin frame for research and the research may thus grasp only a certain dimension of the phenomenon that is easily reachable but detached from the original meaning and the theoretical connections. Furthermore, in empirical research, if the connection to the core of the concept and its theoretical frame is lost, there is a risk of ending up studying a different phenomenon than what was intended (see Bacharach, 1989; Varto, 1992). In this case, it is likely that the results of the empirical studies no longer maintain the contact to the theory, and as a consequence, they may not contribute to the scholarly discussion that is often formed around the theory.

1995; Mezirow, 2007; Miettinen, 1998; 2000; Moon, 2004; Taylor, 2000; 2007.) Rather, several scholars have offered new definitions and interpretations of reflection (see Kreber & Castleden, 2009; McAlpine & Weston, 2000; McAlpine *et al.*, 1999; Moon, 2004) which seem to embody the aim of maintaining the theoretical interest within the field of adult and higher education. However, neither the philosophical bases nor the connections to the previous theories are sufficiently explained in these, either (e.g. Mezirow, 2007). As a result, there are numerous different views on reflection in the research field, while the similarities and differences among them remain unclear (see Bleakley, 1999). From these departure points, it is not always clear how new research contributes to earlier research.

Fourth, the minor interest in theoretical developments is also evident in the one-way communication between theories and empirical studies, i.e. that a theory is used for applications and empirical studies, but the insights from these are not discussed in relation to the theory. In recent years, many studies have been published, particularly those related to the scholarly discussions on Mezirow's (1991; 2000) transformative learning theory. These studies aim to broaden the view of reflection by claiming that reflection is not merely a rational and cognitive process; instead they emphasize emotions and safe relationships as essential elements in carrying out reflection (see e.g. Taylor, 1997; 2000; 2007; 2008.) Nevertheless, these further insights have yet to be used to challenge and develop the theory (Mezirow, 2007).

One way to summarize these different unanswered questions regarding the research on reflection within adult and higher education is to state that studies have focused more on promoting reflection within educational settings, and that the viewpoint of ideals and their justifications are overemphasized. This means that less attention has been paid to what actually happens within these educational settings, and to the prerequisites of promoting or carrying out reflection in the first place. Furthermore, few empirical studies point out the possible challenges and obstacles for facilitating or carrying out reflection in educational settings (see Boud & Walker, 1998; Brookfield, 1994; Hatton & Smith, 1995; Kreber, 2004; McAlpine & Weston, 2000), but a more detailed understanding of the nature of reflection in these terms is not offered. Similarly to other empirical studies on reflection, these studies have not been utilized to challenge and develop the theories of reflection further.

With regard to the empirical studies overall, it appears that the empirical observations mentioned above somewhat contradict the theories. This may be seen as a methodological problem, as the studies themselves rely on the same theories without explicitly considering the discrepancy between theory and practice. This also brings to light differences in the viewpoint or intention of the knowledge construction – an issue not often explicated within scholarly discussions on adult learning and reflection: the theories often aim to depict a possible ideal process of reflection or learning, whereas some of the empirical studies aim to describe the process as it actually happens (see Brookfield, 1994; Illeris, 2007; Peltonen, 2009).

While some scholars and practitioners consider the role of theory precisely to be the depicting of ideals, other scholars argue that a theory on learning should not

only describe the ideals, but account for why the intended learning does not occur (Illeris, 2007; Malinen, 2000; Peltonen, 2009). In many cases, the viewpoints merely expressing ideals and offering justifications for certain practices do not, in fact, contribute to the improvement or development of these practices (see Peltonen, 2009). Within the field of adult education, there is often the explicit interest in supporting adult learning in a practical manner. Nevertheless, the research-based foundation for this may be seen to presuppose a thorough, theoretically and methodologically sound understanding of the phenomena, so as to enable the construction of practical applications and suggestions concerning the practice.

These problems of the prevailing scholarly discussion on reflection form the point of departure for my doctoral thesis: The aim is to construct a theory of the prerequisites and challenges of reflection. My focus is to reach an understanding of the more general nature of the process of reflection, which would offer a base for the development of educational practices. As was demonstrated above, the prevailing theorizations proposed as ideals do not concentrate sufficiently on the complexities of empirical reality. For example, they do not offer conceptual tools for understanding and for working with the current problems of facilitating reflection in practice. Therefore, I considered it important in my research to adopt an approach that is both philosophical and empirical. In essence, my aim is to develop a theory while being supported and challenged by empirical data. As a departure point for this development of theory, I use the theory of transformative learning (Mezirow 1991; 2000; 2009), which is briefly discussed in the following.

The point of departure in Mezirow's theory of transformative learning

Jack Mezirow's (1923–) theory of transformative learning was selected as the starting point for this doctoral thesis, since it offers one of the most sophisticated conceptualizations of reflection within the larger frame of adult learning theory (see Ahteenmäki-Pelkonen, 1994; 1997; Merriam & Caffarella, 1999; Poikela, 1999; Taylor, 1997; 2007). The theory of transformative learning is one of the most cited theories of adult learning (see Illeris, 2009; Merriam & Caffarella, 1999). During the last three decades, this theory has stimulated lively discussion and empirical studies and has been applied in diverse educational contexts. (See e.g. Baumgarner, 2002; Belenky & Stanton, 2000; Brookfield, 1990; Cranton, 2000; 2006; Filander 2005; Illeris, 2009; Kovan & Dirkx, 2003; Kreber, 2006; Lange, 2004; Malinen, 2000; Manninen, 1998; McWhinney & Markos, 2003; Merriam, 2004; Merriam & Caffarella, 1999; Sands & Tennant, 2010; Snyder, 2008; Taylor, 1998; 2007; Öystilä, 2003.)

Mezirow first introduced the idea of transformative learning in 1978; the concept was based on his own and his colleagues' extensive empirical study on women returning to education at a later age. Through this process, Mezirow depicted the process of perspective transformation, where the women – through reflection

– revised the meaning perspectives³ that oriented their thinking, feelings and actions. (Mezirow et al., 1978; 2000; see also Bron, 2005.)

The theoretical roots of Mezirow's thinking can be traced to the work of Paulo Freire, Robert Gould, Thomas Kuhn and the critical theory of the Frankfurt school (Mezirow, 1991; 2000; Puolimatka, 1995; Taylor, 1997). Most debated is Mezirow's application of Jürgen Habermas' position. Mezirow's theory involves the domains of learning that have their origins in Habermas' theory of knowledge and human interests. The influences of Habermas are also evident in Mezirow's notion on reflective discourse. (Mezirow, 1990a; 1990c; 1991; 2000; 2009; see also Malinen, 2000.) Mezirow has aimed to synthesize the individually focused orientation of the psychoanalytic school with the sociological view of critical theory, by formulating a theory of the individual process of transformation, which nevertheless acknowledges the effects of environment and society (Ahteenmäki-Pelkonen, 1997).

Mezirow's theory is a "a theory of learning that is uniquely adult, abstract, idealized, and grounded in the nature of communication" (Taylor, 1998, p. 5; see also Merriam & Caffarella, 1999; Mezirow, 1994a). According to Mezirow, we come to acquire values, attitudes and modes of thinking and feeling through socialization and interaction with significant others. In adulthood, it becomes, in a more wide-ranging sense, possible for us to recognize that we live by these unquestioningly-induced meanings. Becoming aware of these taken-for-granted assumptions and revising them would also be important in terms of validating knowledge. Indeed, according to Mezirow (2000, p. 3), "as there are no fixed truth or totally definitive knowledge, and because circumstances change, the human condition may be best understood as a continuous effort to negotiate contested meanings". Related to this, Mezirow (1991; 2000; 2009) emphasizes contextual understanding that grows out of reflection and reflective discourse.

For Mezirow (1981; 1990b; 1991; 2000; 2009), reflection⁴ means becoming aware of and assessing the taken-for-granted assumptions that govern our ac-

³ Within the discussion concerning transformative learning theory, it has been suggested that the term "meaning perspective" be replaced by the term "frame of reference" in order to avoid unfamiliar jargon (Wiessner & Mezirow, 2000). However, in terms of my interest in the process and challenges of reflection, the term "meaning perspective" appears more relevant, as it more directly points to the viewpoint of Mezirow within the theory of transformative learning. Within my elaboration of the nature of Mezirowian meaning perspective as such (see Study III), the term "frame of reference" seemed to me to have too many general and unspecific connotations in everyday usage (cf. Brookfield, 2000).

⁴ Mezirow has, in his extensive writings over the decades, discerned between several different levels and kinds of reflection (see e.g. Mezirow, 1981; 1990b; 1991; 1998; 2000). My focus is not on the variety and differences among these, but rather on the more general process of reflection that is implied on the one hand by these differing levels and kinds that Mezirow has specified, and on the other hand, by the general idea of the theory of transformative learning. In the following, by the term reflection, I refer to the process of becoming aware and assessing or questioning the assumptions that govern our thinking, feeling and action. However, in most instances, the closest equivalent to the way I use the term is Mezirow's term critical reflection, process reflection, premise reflection or critical self-reflection.

tions, thinking and feelings, in order to construct a more justified or valid belief. Reflection is often triggered by a disorienting dilemma, a real-life crisis or more moderate, growing sense of dissatisfaction with one's old meaning structure. The questioning of these taken-for-granted assumptions may ultimately lead one to reformulate even the very beliefs one bases one's worldview or mindset on. This process of reformulating the meaning perspective is called *transformative learning*, for which reflection is seen to be a necessary yet insufficient condition (Taylor, 2007). According to Mezirow (1991; 2000), a more developed – or “more dependable” (Mezirow, 2000, p. 19) – meaning perspective is one that is more inclusive, discriminating, open, reflective and emotionally capable of change. The ultimate goal of transformative learning is therefore to become aware of one's subjectivity, which is related to emancipation, empowerment, self-directedness, autonomous thinking and taking control of one's own life. (Mezirow, 1981; 1991; 2000; 2006; see also Ahteenmäki-Pelkonen, 1997; Merriam & Caffarella, 1999.)

In addition to reflection, Mezirow (2000; 2009) considers the ideal of reflective discourse as an important medium for validating meaning. Reflective discourse is a special type of dialogue that aims at searching the justifications of beliefs or interpretation and searching for a common understanding through a wide variety of perspectives (Merriam & Caffarella, 1999). Essential conditions for full participation are trust, solidarity, security and empathy. Furthermore, Mezirow (1991; 2000; 2009) emphasizes that in practice, the ideal circumstances of reflective discourse are seldom attained, as any discourse is always to some extent penetrated by the frailties and imperfections of the human condition, as well as the wider patterns of power. As with several other notions in Mezirow's theory, reflective discourse as an ideal represents a direction or goal instead of embodying the current states of practice.

Scholarly viewpoints on Mezirow's theory

Within scholarly discussions, the criticism often presented is related to Mezirow's focus on the cognitive and rational dimensions of learning at the expense of the emotional and social dimensions (see Clark & Wilson, 1991; Illeris, 2004; Jokikokko, 2009; Merriam & Caffarella, 1999; Mezirow, 2009; Taylor, 2000; 2007). Within recent years, however, there has been extensive debate aimed at extending the view of transformative learning towards a more holistic, integrative, and comprehensive conception of learning (see e.g. Cranton, 2006; Dirkx, 2000; 2001; 2008; Dirkx, Mezirow & Cranton, 2006; Gunnlaugson, 2007; Illeris, 2004; Kegan 2000; Mezirow, 2009; O'Sullivan, 2003; see also Boyd & Myers, 1988). Nonetheless, these new perspectives have not offered a theoretical elaboration of Mezirow's theory, and have not considered the conceptual connections between the new and the old interpretations.

Since the most important criticism regarding Mezirow's theory concerns his focus on cognitive and rational aspects at the expense of emotional and social

aspects⁵, an important contribution of a new theoretical perspective would be to explain the conceptual connections among the cognitive, emotional and social aspects, instead of merely introducing an orientation on learning that emphasizes the emotional dimension. Furthermore, as the theory has shown to be productive in many ways, it is evident that the cognitive dimension is useful in describing the adult learning process. Similarly, it is evident this dimension alone is not sufficient, but requires further elaborations that also involve other dimensions. A theorization that focuses, for example, on the emotional dimension but bypasses the cognitive, may well offer an understanding of the issues that Mezirow's theory does not account for. However, in my view, focusing solely on the emotional would run the risk of facing the same limitations as Mezirow's theory, in terms of offering an understanding of the nature of reflection or transformation.

In addition to the emotional and social dimensions, another central issue that is insufficiently conceptualized in Mezirow's theory is the trigger conditions for reflection (see Taylor 1998). Although Mezirow clearly states that reflection may be triggered by a disorienting dilemma, such as a real-life crisis or a more moderate growing sense of dissatisfaction with one's old meaning structure, this starting point for the transformation process has been largely unexamined. For example, a more detailed understanding of the role of reflection in crisis is not offered within the theory, although a crisis may be seen as the most conspicuous manifestation of a disorienting dilemma.

To be precise, based on Mezirow's theory, it is not clear how a disorienting dilemma leads to reflection, although within the discussions on transformative learning, this kind of incongruent experience has been accepted as a valid trigger of it. In fact, this seems quite unnatural as a conclusion, considering that the crisis itself is an acute emotional strain, and reflection has also been seen to be a challenging and painful process (see e.g. Berger, 2004; Brookfield, 1987; Illeris, 2007; Mezirow, 2000; Taylor, 2007).

On the other hand, this brings out an intriguing tension within Mezirow's theory. While his theory is intended for adult educators in order to facilitate transformative learning in educational settings, the process of transformation was originally conceptualized in a non-facilitated context based on the experiences of adults in a real-life change process (Mezirow, 1978; see Belenky & Stanton, 2000; Manninen, 1998). Yet the questions regarding this essential distinction have not been considered within the theory or within the scholarly discussions. Rather, there are empirical studies exploring the process of transformation within con-

⁵ Besides the cognitive, emotional and social dimensions, reflection may as well be considered in terms of other dimensions, such as the spiritual or cosmological dimensions (see Dirkx, 2000; O'Sullivan, 2003; Merriam & Caffarella, 1999; Mezirow, 2009). Within this doctoral dissertation, however, I focus only on the cognitive, emotional and social dimensions of reflection. These three may be seen to be most clearly implied by Mezirow's position, which serves as the starting point for this research.

texts where a disorienting dilemma has occurred, such as in HIV (Baumgartner, 2002; Courtenay et al., 1998; Courtenay et al., 2000) and suicide bereavement (Sands & Tennant, 2010), which are used as validations for the theory of transformative learning. Since these empirical studies have brought validation to the theory, the justifications for applying the theory in educational practices have often seen to become strengthened as well. However, the differences between these contexts are not discussed. Considering the contextual issues would be important, as the results of the studies may not, as such, be transferred across these contexts, but require further attention. My view is that it is important to research transformative learning and reflection within the contexts in which they more naturally emerge. This makes it possible to deepen the understanding of reflection, which could then be used to improve the practices in which reflection is being facilitated. However, an essential feature of this is to explicitly consider the questions with regard to the differences among these contexts, as these contexts may be seen to offer very different perspectives on reflection.

These questions of context are also central for my doctoral thesis concerning the prerequisites of reflection, since these contexts differ precisely in terms of whether or not they naturally entail the trigger for reflection. Furthermore, as a disorienting dilemma may be encountered within a crisis that in particular is an emotionally chaotic experience (e.g. Kübler-Ross & Kessler, 2005; Salzer, 1991), it may be assumed that the emotional dimension of reflection is a significant factor within reflection. Previous studies have also suggested that emotions and safe relationships are inextricable factors within the process of reflection (e.g. Brookfield, 1994; Jokikokko, 2009; 2010; Taylor, 1997; 2000; 2007; 2008). In addition, according to the theory (Mezirow, 1991), a disorienting dilemma calls into question the assumptions that are socially absorbed. Therefore, it may be assumed that the social dimension plays a part within this process as well. Thus it is precisely *the connections between* the cognitive, emotional and social dimension, noted above as insufficiently conceptualized within Mezirow's theory, that are important from the viewpoint of my research on the prerequisites and challenges of reflection.

To summarize, the above issues concerning the practice and research on reflection as well as Mezirow's theory of transformative learning offer the departure points for this doctoral thesis, which aims at developing a theory of the nature of reflection. In the following chapter, the research frame is explained, including the research questions and the methodical choices. Chapter 3 offers an overview of the five studies that form the parts of this doctoral thesis and which have been published in academic journals or edited books. Chapter 4 summarizes the developed theory, whereas Chapter 5 evaluates the research process.

2 THE RESEARCH FRAME

This section presents a description of the aim of the research, the research questions and the methodical choices.

2.1 The aim of the doctoral thesis

The aim of my doctoral thesis is to explore the prerequisites and challenges of reflection in order to theorize the nature of reflection.

The terms reflection, reflectivity, reflexivity, etc., are used in different ways in different disciplines and traditions, for example, within philosophy, sociology, psychology and education. Broadly speaking, regarding reflection my focus is on the intent of increasing awareness and assessing assumptions, in association with the process of learning, similar to the way the concept is understood within the discussions on adult and higher education. More specifically, I rely on the definition of reflection as it appears in Mezirow's writings as a reference to *becoming aware of and questioning the assumptions that orient our thinking, feeling and acting*.

By *theorizing*, I refer to the intent to construct conceptualizations regarding a phenomenon that has been insufficiently conceptualized within previous theories. In order to depict the nature and dynamics of the phenomenon, it is important to aim for explicitly considered conceptual connections. This kind of conceptual net is understood here as a theory (see Bacharach, 1989; Brookfield, 1992; Whetten, 1989).

Furthermore, by referring to the *nature* of reflection, I indicate a focus on the dynamics of the process of reflection. Within the scholarly discussion on reflection, the focus is often on defining the varying contents and levels of reflection. In contrast, my focus is on the conceptual linkages among Mezirow's theory which may be seen as the immediate theoretical context through which his view on reflection needs to be understood. On the one hand, instead of considering reflection as an independent entity (see Bacharach, 1989), also often implied within the research on reflection, I examine the concept of reflection through its relations to the neighboring concepts. On the other hand, my focus is on the relationships between the cognitive, emotional and social dimensions of reflection and the related concepts.

Through analyzing these different conceptual relations, I aim to deepen the understanding of the different intervening factors and dimensions and their relations that contribute to form the nature and dynamics of the process of reflection (see Emirbayer, 1997). Thus my approach may be referred to as *relational* in the sense that the focus of my analysis is on the relation between the elements and on the dynamic nature of the unfolding processes (Emirbayer, 1997). Following Cassirer (1953; quoted in Emirbayer, 1997), the relational methodology has been considered in sociological research as an alternative to the substantialist thinking

that consider various kinds of substances (things, beings, essences) as the units of all inquiry (Emirbayer, 1997).

2.2 The research questions

The research questions may be stated as follows:

- What is the nature of the process of reflection?
 - What kind of challenges are there for reflection?
 - What are the prerequisites for actualizing reflection?
 - How may disorienting dilemmas trigger reflection?
 - What kind of roles do emotional and social dimensions play in reflection, along with the cognitive dimension?

These questions are approached from different perspectives in Studies I-V. Study I explores the practical challenges and obstacles higher education teachers face on their path from reflection to practice, through examining the connection between reflection and action. Even though reflection is often assumed to lead to changes in action, this relation, in fact, has not been examined. Study II elaborates on the possibilities of a disorienting dilemma, originating from a life-event crisis, triggering reflection. Both Study I and II were based on analyzing empirical data. In contrast, Studies III, IV and V were based on theoretical analyses. Study III involved a conceptual analysis of Mezirow's view on reflection and resulted in a conceptualization of the challenges of reflection. This forms the core of the theorization constructed within this doctoral dissertation. Studies IV and V elaborate on this theorization and consider further the specific conceptual questions within the theorization. Study IV examines the conditions for meaning making in critical situations within the context of military pedagogy, and considers the social dimension of reflection in terms of the influence of community and cultural expectations. Study V deepens the examination of Study IV by focusing on the influence of critical situations on our cognitive functions. Except for Study III, all studies analyze reflection in different contexts. However, the specific contexts of the studies were not the focus within the frame of this doctoral thesis; rather they offered a way to explore various aspects of reflection.

The research may be characterized by a multi-faceted approach that involves examining reflection with different methods, from different viewpoints, and in different contexts. As was argued in the previous chapter, considering the prerequisites and challenges of reflection is not a straightforward question. It is associated with several different types of problems or neglected aspects within previous research, such as the limitations of the earlier theories, the perceived problems of evoking reflection in practice, as well as the limitations and methodological issues pertaining to empirical studies. Consequently, it may not be possible to address the research questions with any one method or viewpoint. The following section

considers the various methods, involving both philosophical and empirical approaches. The choice of contexts is explained further in Chapter 3.

2.3 Methodical choices

This section discusses methodical choices: First, I will briefly discuss issues of theory building relating to *Studies III, IV* and *V*. Second, I will consider the way the empirical *Studies I* and *II* supported, challenged, and helped to refine and enrich the theorization. More specific methodical considerations may be found in the published articles within this work.

Theory building

My aim in theory building was to conceptualize the kind of phenomenon that no earlier theory has as yet conceptualized. The broad approach to theory construction in this research is referred to as *synthesizing theory building*,⁶ as it is based on earlier theories (see also Bacharach, 1989). The earlier theories are analyzed in order to locate both the most fruitful aspects of the theories, as well as their limitations, in terms of the research question, thus forming the foundation for a new conceptualization based on these analyses. The methods applied were *rational reconstruction* and *conceptual analysis*. The phases of theory building will be discussed below in more detail.

Theoretical analysis: Rational reconstruction and conceptual analysis

The theory building presented in this dissertation is based on the analysis of Mezirow's theory. The orientation of this analysis embodies the method of rational reconstruction. Rational reconstruction may be seen as *rational* in the following sense: In rational reconstruction, one attempts to capture the kind of rational core of the material that may be meaningfully applied to the aims of the research (Davia, 1998; Peltonen, 2009). Consequently, in reconstructing the more productive elements, as well as in arguing there are limitations in the theory, the aims that the theory in itself has explicated, are not the reference point. Rather, the fruitful aspects and the limitations are specified precisely from the viewpoint of the research.

Furthermore, according to Carnap (1961, 138; quoted in Peltonen, 2009), the aim of rational reconstruction is that an intuitive conception becomes transformed in the form of logical inferences (see also Davia, 1998; Habermas, 1976;

⁶ I have worked the methodological questions concerning theory building in my research in tandem with doctoral candidate Susanna Hannus, with whom we have also presented papers on the methodology of theory building at both domestic and international conferences (see Luoma & Hannus, 2009; Mälkki & Hannus, 2010; see also Hannus, 2011; Mälkki, 2011).

1979; Peltonen, 2009). This refers to a more general idea of aiming to explain and conceptualize, in an argued form, issues that previously may have been intuitively understood but without an explicit format (see Habermas, 1976; 1979).

Rational reconstruction is not a specific and clearly defined method; there are different definitions and variations of it (see Carnap, 1961; Davia, 1998; Habermas, 1976; 1979; Hannus & Simola, 2010, Leiviskä, 2011; Peltonen, 2009; Rorty, 1984). The general idea of rational reconstruction may be clarified in comparison to the method of historical reconstruction more often used within educational research. The main objective of historical reconstruction is to reconstruct the material on the original author's own terms, thus focusing on the author's thinking as an endpoint. In addition, the need to study the historical development of the author's thinking may be emphasized. (Holma, 2009; 2011; Jussila, Montonen & Nurmi, 1989; Peltonen, 2009; Rorty, 1984.) In contrast, rational reconstruction aims at interpreting the research material from a standpoint that is external to the material itself. More precisely, the research question or the chosen position determines the perspective from which the material is reconstructed. (Peltonen, 2009, Rorty, 1984.)

Despite the different emphases, historical and rational reconstructions are not mutually exclusive. In fact, rational reconstruction may be seen to always include historical reconstruction to some extent: To be able to locate the more productive as well as the limited aspects in terms of the research question, one needs to have a solid grasp of the material itself. Thus phases are required in which the material is to be understood on its own terms⁷ (see Leiviskä, 2011; Peltonen, 2009; Rorty, 1984).

As a more specific method within rational reconstruction, I conducted a conceptual analysis (see Holma, 2009; 2010; Kakkuri-Knuuttila, 2007; Ruitenberg, 2010) to analyze the concepts and the ways they are used within the theory, as well as the interconnections and coherence of the concepts. This more detailed analysis enabled me, on the one hand, to gain a deeper understanding of the theory in order to reconstruct the productive aspects and to locate the limitations of the theory in terms of the research question. On the other hand, through conceptual analysis, I could locate conceptual discrepancies within the theory that could be used as the starting point for the later analyses.

⁷ In historical reconstruction, it is often pointed out that the reconstruction should be such that the original author, in principle, would accept the interpretation. In my research I had the privilege to be able to test both my interpretations of Mezirow's ideas and my theoretical developments in a personal discussion with Mezirow himself (see Mezirow, 2007). Thus I did not merely aim to grasp Mezirow's original thinking in principle, but could try out and ascertain my interpretations during the research process.

As mentioned above, through analyzing the concepts and conceptual relations within the given theory, I reconstructed the fruitful elements of the theory as well as the limitations from the viewpoint of the research question. The fruitful aspects were then taken as the starting point for the theory building. The limitations indicated, instead, the areas in which more understanding was needed. Furthermore, identifying these limited areas offered grounds for selecting another theory that could be utilized in providing a complementary understanding. In the following I use the term *complementary theory* to refer to these auxiliary theories that were chosen based on the earlier phases of analysis. Furthermore, the term *base theory* is used in reference to the theory that was the starting point for the given phase of research.

Studies III, IV and V, which discuss synthesizing theory building, are summarized in Chapter 3. Here they are only discussed briefly in terms of the methodical choices of utilizing complementary theories.

In Study III, based on analyzing Mezirow's theory, it appeared that a more detailed understanding was needed of the nature and functions of emotions as well as of the interconnections between emotion and cognition. Therefore, Antonio Damasio's (1994; 1999; 2003) theory of emotions and consciousness was chosen as a complementary theory.

Study IV, on the other hand, was concerned with military pedagogy. In that study, the purpose was to explore the possibilities and challenges of meaning-making and acting in critical situations.⁸ First, I analyzed the most productive elements as well as the limitations of Mezirow's theory, in terms of this question. In order to complement the issues that were relevant for the research question but were, quite naturally, excluded from Mezirow's adult learning theory, I considered the central theories of military pedagogy as complementary theorization. The analysis was based on Mezirow's theory. However, during the later phases of analysis I utilized the theorization I constructed within Study III, as this theorization involved elements fruitful in bridging the gap between Mezirow's conceptualizations and the military pedagogical questions that emerged during the analyses of Study IV.

The aim of Study V was to conduct a deep exploration into the limitations of thinking in critical situations, within the light of military context. The starting point for the study was Clausewitz's (1780–1831) thoughts on friction, a concept concerned with the actualities of war. The first phase of research involved a conceptual analysis and a reconstruction of the fruitful and limited aspects of the the-

⁸ Although Studies IV and V are concerned with issues of military and battlefields, their focus is not, for example, on subverting the enemy, as in many discussions on military (see Mälkki, J. 2010; Rekkedal, 2007). Rather, the focus is on how our cognitive functions may be influenced by extreme situations. Within the frame of this doctoral dissertation, this understanding is utilized in order to consider ways in which the cognitive functions related to reflection are influenced in everyday life.

ory, in terms of the viewpoint taken in each study. In order to deepen the understanding of the aspects that appeared insufficiently conceptualized by Clausewitz, I utilized, as a complementary theory, my own theorization synthesizing elements of Mezirow's and Damasio's theories.

Each study involving utilizing complementary theories included a similar round of conceptual analysis and rational reconstruction as the base theory was subjected to. Thus the conceptual relations were considered, and the fruitful and limited aspects of the complementary theory were analyzed from the viewpoint of each study. After this, the two theories were juxtaposed and analyzed in terms of their coherent and complementary aspects. The theories were also contrasted (see Hannus & Simola, 2010) in order to pinpoint their differing elements and the contradictory aspects.

The coherent aspects formed the basis for the synthesizing theorizing. The complementary aspects, in turn, helped to enrich the conceptualization by deepening the understanding of the concepts. In contrast, the differing elements were further analyzed in terms of their relevance for the research question, i.e. it was established whether these differences implied that one of the theories included elements needing to be re-analyzed. The contradictory aspects required even closer attention, as they entailed conceptual discrepancies between the theories. After a more detailed analysis was conducted, some of these discrepancies appeared to point to issues that, once resolved, would allow the conceptualization of the issues that were important for my theorization under construction. As the presuppositions of each of the theories' arguments were reconstructed, in some cases it became possible to build a conceptualization that resolved the apparent discrepancy among the theories. In other cases, the discrepancies either proved to be insignificant for the purposes of my study, or the discrepancy was considered a background issue to be kept in mind when using these particular elements of the theories together.

Theory building: Synthesizing conceptualization

The results of theory building may be regarded as a synthesizing conceptualization that offers understanding of the nature of reflection. This conceptualization involves argumentation and descriptions that are anchored to earlier theories (see Bacharach, 1989). More precisely, the conceptualization is composed first of the interpretations that are reconstructed on the basis of the earlier theories. This includes explications and considerations of the conceptual relations that were not sufficiently considered within the earlier theories. Second, the conceptualization involves new definitions and interpretations regarding the concepts of the earlier theories. Third, it contains interpretations of the conceptual relations specifically in terms of the research question. Fourth, the conceptualization involves interpretations of the relations between the utilized theories. Some of the discrepancies between the theories could be remedied by examining their assumptions further,

and by building theorization to explain them from a wider perspective. Fifth, and most prominently, new concepts were formed based on these analyses, in order to bring into light particular issues in the spaces in between theories. These issues were at the heart of the interpretation of the nature of reflection, and at the same time they enable bridging some of the gaps between the earlier theories. This developed theorization is presented in the Chapter 4.

Utilizing empirical approach as a support and challenge to theory building

Along with the theoretical analyses, I used an empirical approach in order to support and challenge the theory building (see Layder, 1998; see also Eisenhardt, 1989). As explained in previous sections, this choice stems from the criticism directed at earlier studies, as well as from my own perception on the state of the research on reflection. My aim in utilizing the empirical approach in addition to the theoretical was to deepen the understanding of the actualities of reflection by maintaining the contact with empirical material alongside the theoretical analyses (see Brookfield, 1992). Before describing the more specific forms in which this dialogue between theoretical and empirical approaches occurred, I will briefly describe the empirical data and the analyses in the following. More detailed considerations on these may be found in Studies I and II.

Overview of the empirical data and analyses

Studies I and II form the empirical parts of the research. The data for Study I consists of 76 interviews of university teachers. Seventy-one of the interviews were semi-structured, lasting from 30 to 80 minutes, whereas five were unstructured, lasting from 120 to 180 minutes. The participants were from a wide variety of disciplines from Finnish universities. The data for Study II consists of four unstructured interviews of involuntarily childless women, each interview lasting from 120 to 180 minutes. Participation in both studies was voluntary.

The aim of both Study I and II was to explore empirically particular issues that, based on theoretical analyses, had appeared to be relevant with regard to the nature of reflection. Thus my focus was not as much on classifying the contents of the interviews (see e.g. Kreber & Castleden, 2009; Shank, 2006), but rather on the ways these specific conceptual issues appeared within the data. From this perspective, the main aspect of the interviews was that they involved considerations on a variety of topics associated either to teaching at the university (Study I) or involuntary childlessness (Study II). In particular, the unstructured interviews intended to allow the interviewees the space to voice their thoughts and to explain their experiences as freely as possible. While I ensured that certain broad topics were covered, the interviews proceeded primarily according to the topics brought up by the interviewees.

In addition to the more common way of acquiring data by conducting interviews for the purposes of the study (see Corti & Thompson, 2007; Åkerström,

Jacobsson & Wästerfors, 2007), I also used relevant interview material already collected for an earlier study (e.g. Postareff, Lindblom-Ylänne & Nevgi, 2007; Postareff & Lindblom-Ylänne, 2008). Regarding Study I, the seventy-one semi-structured interviews with university teachers had been collected for an earlier project led by the second author of this study. This data also appeared to be suitable for my purposes, as the interviewees represented a wide variety of disciplines and the interviews covered the teachers' work broadly. However, in addition to this large amount of data, I considered it important to conduct some interviews by myself. By conducting five open interviews, I aimed to gain a more thorough grasp of the viewpoints of university teachers. This also helped me to analyze the previously collected material better (see Corti & Thompson, 2007). Further, while the semi-structured interviews offered a perspective on the researched issues through a great number of interviewees, by conducting open interviews myself I sought to gain a deeper grasp of the teachers' personal meanings. In addition, in the analyses I could consider these two sets of data parallel to each other, thus gaining more understanding of each than would have been possible through analyzing only one kind of interviews.

Regarding Study II, I had conducted the four interviews earlier for the purposes of my Master's thesis (Luoma, 2006). Utilizing this previously analyzed data offered the benefit of long-term familiarity with the material (see Åkerström *et al.*, 2007). While it took time to be able to step out of the previous interpretations of the data, in the end I was able to reach an understanding of the data on a much deeper level (see Atkinson, 1992).

Dialogue between the theoretical and empirical approaches

My approach in the empirical analyses could be characterized as a combination of data-driven and theory-driven analyses. In other words, I aimed empirically to explore particular, broader conceptual questions that had emerged from the theoretical analyses. In the resulting data-driven analyses, I aimed to increase the understanding of these conceptual issues. In addition, my intention was to raise further issues that could be used to detect unexamined assumptions within the theory and thus stimulate further theory development.

Moreover, examining the empirical data brought out questions that are raised in practical contexts, which thus became tools for challenging the theory. The theory was thus not used only one-way to consider and interpret empirical data, but this linkage was also used the other way around. In other words, the empirical analyses were used in order to question the lines of thinking in the theoretical considerations, and to enrich the viewpoints of the theoretical analysis.

During the research process, it became clear that this choice of approach offered further benefits in terms of supporting the theory building and of deepening the understanding both of the research field as well as of the phenomenon. In other words, the empirical analyses required me to familiarize myself deeper with

the earlier empirical studies, their findings and their methodological choices. This enabled me to perceive the field of research on reflection in a more nuanced way, involving both theoretical and empirical viewpoints. Further, I inferred the scholars' implicit understanding of the nature of reflection from the methodological choices within their empirical studies – an issue not often explicitly considered.

Further, by conducting my own empirical analysis, I had the opportunity to gain experience in applying Mezirow's theory. This enabled me, in the light of the empirical data, to get a sense of the strengths and weaknesses of the theory, debated in the scholarly discussion. It also offered me a personal feel of the relation between theory and practice in terms of reflection in general. Lastly, conducting empirical analyses in the light of Mezirow's theory naturally also served the theoretical analyses, as I gained a deeper understanding of the concepts and conceptual relations of the theory I used as the starting point for my own theoretical development.

3 OVERVIEW OF THE STUDIES

This section provides an overview of the five studies, including their aims, methods and findings. The findings of each study are briefly considered from three viewpoints: 1) the context of the study, i.e. the scholarly discussion to which the article contributed; 2) the implications concerning theory building; and 3) the methodology of researching reflection, which also sheds light on the nature of reflection. The articles that follow contain more detailed descriptions of the context of each study, as well as of the specific methodological issues and methodical choices.

Study I: Empirical examination into the effects of the reflection of university teachers

Study I *“From reflection to action? Barriers and bridges between university teachers’ thoughts and actions,”* deals with the relation between reflection and action and considers the effects, results and limits of higher education teachers’ reflection. A prevailing assumption in many scholarly discussions and practice of reflection is that an increase in teacher reflection would become channeled into a teacher’s action, and thereby support student learning. Based on the analysis of interviews with 76 university teachers, this assumption was examined in more detail. It appeared that the “limits” of reflection and *what is not reflected upon* may be more decisive in terms of teachers’ actions than how deeply and reflectively the teachers may conceive of teaching and learning: what is *not* reflected upon may overrule the practical significance of one’s reflection-based views. In addition, the findings emphasize the need to consider the institutional context of a university teacher’s development: Although discussions on reflection often focus on the way reflection may unravel barriers to action, the analysis suggested that the limits to action may also be experienced as barriers to reflection. That is, if teachers experience that their potential efforts to develop their teaching cannot be realized, they may withdraw from reflection altogether and lose sight of the issues that, in fact, could have been altered.

From the viewpoint of university pedagogy, the findings of Study I provide an understanding of the practical challenges and obstacles in university teachers’ reflection with regard to the development of their scholarship of teaching and to the development of their teaching. The findings reveal issues that form barriers in teacher development. These issues could be worked upon during pedagogical training, to support teachers in dealing with the potential challenges within their specific work context as university teachers.

In terms of theory building, Study I points to the university teachers’ social, cultural and material context, and presents various factors that affect the ways in

which one may or may not begin to reflect. This indicates the limitations of the rather individualistic view on reflection that prevails within university pedagogy, and it calls for further examination of the challenges and prerequisites of reflection.

From the viewpoint of methodology, Study I emphasizes the importance of context in terms of realizing one's reflected views. For example, the meaning structure within which one ponders on given assumptions and beliefs is not necessarily the same within which one interprets situations in practice. That is to say, in examining reflection, it must be taken into account that the way in which a person reflects in one situation is not necessarily the same as in another situation, which influences the kinds of conclusions that may be drawn from examining reflection in a given time and context.

Study II: Empirical examination into the trigger for reflection in crisis context

Study II, *"Rethinking disorienting dilemmas within real-life crises: the role of reflection in negotiating emotionally chaotic experiences"* examines how a disorienting dilemma, a life event crisis, may trigger reflection. Study II is based on an analysis of interviews with four involuntarily childless women. The starting point for this study was a central proposition in Mezirow's theory: that reflection is often triggered by a disorienting dilemma, a real-life crisis or a more moderate, growing sense of dissatisfaction with one's old meaning structures. A crisis may therefore be seen as a natural context for the emergence of reflection, despite the fact that the theory in itself is intended for adult educators and portrays an adult learning process. It may be seen that Mezirow has depicted the transformation process in a non-facilitated context and that he aimed to promote this kind of learning also in the facilitated contexts of education. The differences and similarities between facilitated and non-facilitated contexts, as well as their meaning in terms of reflection, have not, however, been examined within Mezirow's theory nor within the later studies based on that theory. My assumption was that it may be useful to examine reflection within the context where it emerges more naturally. Based on this understanding, it may be possible to promote reflection better also within facilitated contexts.

Even though Mezirow's theory has been widely applied and empirically studied, this basic proposition of a disorienting dilemma as a trigger for reflection has not been further examined. The theory does not clarify *how* a disorienting dilemma may trigger reflection, or what the role of reflection is in a crisis. In fact, that reflection should be sparked off by a crisis seems quite unnatural a conclusion, considering that a crisis already is an acute emotional strain in itself while reflection has also been seen to be a challenging and painful process (see e.g. Berger, 2004; Brookfield, 1987; Illeris, 2007; Mezirow, 2000; Taylor, 2007). In examining the interconnections between disorienting dilemmas and reflection, I paid particular attention to the emotional and social dimensions alongside the cognitive dimension.

From the viewpoint of adult education, Study II reveals both the nature of the reflective processes of involuntarily childless women and the diverse roles of reflection within the different phases of crisis. Often in the discussions on transformative learning, the transformation itself is emphasized as an endpoint (see Taylor, 2007). In addition, it is often stated that in transformation, one does not only see through the revised perspective but lives through it (see Mezirow, 2000). My study suggests that this understanding of the role of reflection is limited. Although adult educators might not be working with people facing an acute crisis, it would nevertheless be important that they understand the variety of ways in which reflection may function, and what kind of effects and costs it may bring about. Profound reflection may also have profoundly unpleasant consequences, and educators should be sensitive to this and have the tools to work with these issues. On the other hand, the kind of reflection that entails changes in one's actions or experiences is not the only kind of reflection that may be seen as beneficial. In fact, sketching out new paths of meaning and playing with them may be an important intermediate phase. One may gain distance to one's previous ways of thinking, becoming ready to step on these paths later.

From the viewpoint of theory building, Study II provides, in addition to the previous issues that are also theoretically relevant, a conceptualization of the interplay between the cognitive, emotional and social dimensions with regard to disorienting dilemmas. That is, the findings shed light on disorienting dilemmas as a high emotion state, which may, however, be negotiated over time through rational processes of reflection. Based on the findings of this study, it was possible to discern the differing ways in which emotions are significantly associated with reflection, depending on how critical the issue is. Some of these ways may be seen to be general in the sense that the instances are similar in everyday contexts. All these findings provide further insight into the dynamics of how a disorienting dilemma may trigger reflection.

Furthermore, specifically in terms of the social dimension, I detected a special kind of trigger for reflection which appears during the later phases of negotiating a crisis. As a person's interpretations and assumptions may change along with the process, unexpected misinterpretations and contradictions may appear with until then like-minded significant others. Uncomfortable feelings associated with these instances, often serve as *second-wave triggers for reflection*, stimulating further reflection on the nature of these contradictions.

Within scholarly discussions, the role of reflection is often seen as a means of furthering sophisticated meaning structures, learning and development. In addition, in the context of crisis, reflection appeared to enable meaning making in an emotionally chaotic situation that was incomprehensible from within the existing frameworks of meaning.

From the viewpoint of methodology, Study II raises another issue of examining reflection based on empirical data. Study II suggests that it is necessary to consider the data from different perspectives if one is to reach the meaning of a

certain reflective instance to the individual in question. On the one hand, a researcher cannot take for granted that the critical pondering performed by an individual would necessarily indicate the presence of the profound issues associated with it theoretically, or that the individual would live through the perspectives represented in this pondering. On the other hand, it is not adequate to assume that the profound issues are the only ones that matter. In this sense, in researching reflection, it is not sufficient to lean on the mere excerpts indicative of reflection. Rather, interpreting the meaning of the excerpts presupposes both an understanding of the context and the possible process that the individual is going through, as well as sensitivity to the nuances that may be significant in that individual's case only.

Theoretically, this is a question of the relation between reflection and one's individual meaning perspectives. Although meaning perspectives are socially constructed and involve large numbers of shared elements, the meaning of these elements to the individual is formed in proportion to the entirety of one's personal meaning perspectives. Therefore, the ultimate meaning of a certain reflective act is only understandable in relation to one's meaning perspective. That is to say, the often-used classifications (see e.g. Mezirow, 1981; 1990b; Kitchener & King, 1990; Kreber & Castleden, 2009) of the levels of reflection do not in any straightforward manner indicate the meaning of a particular reflective act to the respective individual. Thus, what may look as superficial to an outsider may to the insider be a transformative opening to something entirely new. Correspondingly, what to an outsider may look like a profound critical pondering, may, in fact, to the person in question be a repetition of an old pattern imitated unquestioningly from someone else.

Lastly, the more general perspectives uncovered by examining reflection in the context of crisis indicate that the relations between these contexts are worth examining. The crisis context may reveal issues and viewpoints also relevant in other contexts but where they are less easy to detect. Although these issues appear in a different light in different contexts, they nevertheless raise important questions that are pertinent across contexts.

Study III: Theory building based on Mezirow's theory: theorizing the challenges of reflection

Study III, *"Building on Mezirow's theory of transformative learning: Theorizing the challenges to reflection,"* proposes a theory which sheds light on the nature of reflection by conceptualizing the challenges of reflection. The theory development was based on analyzing Mezirow's theory of transformative learning. In order to obtain an in-depth understanding of the emotional dimension which was productive yet insufficiently conceptualized within Mezirow's theory, as a complementary theory, I utilized Antonio Damasio's neurobiological theory of emotions and consciousness. The conceptualization constructed within Study III forms the basis for the theorization developed in this doctoral thesis (see Chapter 4). The

present study focuses on the interconnections between the cognitive and emotional dimensions of reflection.

From the viewpoint of theory building, Study III offered several different findings. In general, the study involves the core of my theorization on the nature of reflection, which is further explicated in Chapter 4. More specifically, this involves theoretical findings concerning first, how I have reconstructed Mezirow's concepts of reflection and meaning perspective, and in particular their interconnections in terms of the cognitive and emotional dimensions. Second, I have demonstrated that there is a conceptual tension between these two concepts proposed by Mezirow, which I have explained as being indicative of the challenging nature of reflection. Third, I have constructed the conceptual connections between the theories of Mezirow and Damasio. Fourth, I formed new concepts, *comfort zone* and *edge-emotions*, which enable an explanation of the dynamics of the prerequisites and challenges of reflection.

From the viewpoint of adult education, Study III builds a theoretical basis for deepening the understanding of the nature of reflection and the challenges of bringing about reflection in educational practices.

From the viewpoint of methodology, Study III presents a theoretical frame to bridge some of the methodological gaps within the earlier empirical studies; these studies offer insights that are incongruent with the theory they are based on, without explicating these questions or refining the theory. In essence, the theorization offered in Study III enables one to examine these empirical insights further. For future studies, the theory presented in Study III provides a theoretical basis that is explicitly connected to Mezirow's theory, while involving further conceptualization both on the actualities of reflection and on the intertwinement of emotion and cognition, insufficiently conceptualized by Mezirow.

Study IV: Theoretical exploration into the possibilities for preparing to act in crisis context

Study IV, *"Preparing to experience the unexpected: Theorizing challenges of transforming soldiership,"* deals with the possibilities and challenges of the development of a soldier's action competence. The topical issue in military pedagogy is how to train the soldiers to act ethically and to maintain judgment in the unexpected and chaotic situations on different battlefields. This issue intersects with the viewpoint of my research in two important ways.

First, as has been demonstrated earlier, when one examines the prerequisites of reflection, it is useful to examine reflection in the contexts where it more naturally emerges as a possible result of a disorienting dilemma, as well as in the educational, facilitated context of adult learning. In these terms, the context of military pedagogy may be seen to involve both of these aspects. Military pedagogy is concerned with training the soldiers, thus embodying an educational context. On the other hand, military pedagogy is specifically concerned with preparing the soldiers

both to act in crisis context and to recover from these. Thus the context of military pedagogy may be seen as an educational context dealing with questions of crisis.

Second, in Study II it was shown that the role of reflection in a crisis context was essentially that it enables making meaning in a chaotic situation. This question of meaning making is of importance for soldiers, who are not only expected to manage in chaotic situations, but also to remain capable of ethical and considered decisions, as an essential element of their professional conduct.

These issues were at the heart of Study IV, as it aimed to conceptualize first the prerequisites of being able to maintain judgment in chaotic situations, and second, the ways in which practicing for this would be possible. The study was based on analyzing Mezirow's theory – in which the process of meaning making is in the center – taking as its point of view the indications of when meaning making is *not* possible. The key theorizations of military pedagogy were used here as complementary theories, in offering understanding of the context-specific questions of both the goals of military training as well as the characteristics of military contexts. Furthermore, the theorization constructed in Study III was also utilized as a complementary theory, since the analysis brought in view questions that could be approached through my earlier conceptualizations.

From the viewpoint of military pedagogy, Study IV offers a theoretical base for deepening the understanding of the possibilities and challenges of preparing to maintain one's judgment in chaotic situations. Further, Study IV provides concrete tools for this, by illustrating specific everyday instances and experiences, through which it is possible to get a sense of the experience of unexpectedness and chaos one would face in a battlefield context. Practicing with these experiences may be integrated into peace-time training.

From the viewpoint of theory building, Study IV conceptualizes the experience of the unexpected and chaos, and discusses how these experiences affect our thinking and perception. This conceptualization complements Mezirow's view on meaning making and, moreover, refines the theorization on edge-emotions by offering support for this notion through another line of argumentation linked to the theory base of military pedagogy. In addition, Study IV contributes to the understanding of the social dimension of reflection in that it considers how community and culture may affect one's personal reflections.

From the viewpoint of methodology, Study IV demonstrates how different contexts may be utilized in order to acquire an understanding of the processes involved in adult learning. Although the issues in military pedagogy are to some extent specific and in many ways extreme, they nevertheless introduce questions that are also relevant in other contexts. For example, the question of recovery after encountering a personal crisis bears a more general relevance beyond the concerns of the soldiers after they return home. The common elements are also manifested in the fact that the theorization of Study III, built based on Mezirow's adult learning theory in order to conceptualize the prerequisites of reflection, was also useful in examining the questions of military pedagogy.

Study V: Theoretical exploration into the limitations of thinking in critical situations

Study V, *“The Dynamics of Clausewitzian Friction,”* offers a more in-depth examination of the ability to maintain judgment in warlike situations. In Study IV, the considerations concerning the military context appeared to raise issues relevant to the examination of the prerequisites of reflection, especially in terms of edge-emotions (which were introduced in Study III and illustrated by the empirical findings of Study II). Study V complemented the analyses of Study IV and enabled the refining of the theorization that was developed in Study III. In Study V, Clausewitz’s classical military theoretical concept of friction was used as the starting point that offered an understanding of experiences in a war context. The findings of Studies III and IV were used as complementary theorizations.

From the viewpoint of the art of war, Study V further developed Clausewitz’s conceptualization of friction. In military theoretical discussions, Clausewitz’s notion of friction is often interpreted as a general impediment that accounts for falling short of plans, but a more detailed understanding of the processes that contribute to friction is not considered. The analysis of Clausewitz’s view, however, suggested that the concept reveals the human experience of war and its effects on cognitive functions. The implied processes behind these delineations could be conceptualized by utilizing and further developing the theorizations constructed in Studies III and IV.

From the viewpoint of theory building, Study V enabled the refinement of the theorization that had been developed in Study III. On the one hand, the examinations of Study V offered further indication of the ways in which the theorization of Study III may be applied in various contexts. On the other hand, some of the arguments of my theorization appeared to gain support from Clausewitz’s conception on friction through a parallel analysis (see Chapter 2.3), even though Clausewitz’s view was based on entirely different starting points.

4 THEORIZING THE NATURE OF REFLECTION

The aim of this doctoral dissertation is to theorize the nature of reflection. The research may be seen as a response to the topical problem of promoting reflection in educational practices. Another research aim is to remedy some of the limitations of the previous theories on reflection. As was demonstrated in Chapter 1, despite the abundant efforts to promote reflection in educational settings, the results remain ambivalent. As I have argued before, this is indicative of the fact that the prerequisites and challenges of reflection are not known. The previous theorizations approach reflection from the perspective of ideals and offer descriptions of possible contents and levels of reflection. Furthermore, despite empirical research indicating reflection has emotional and social dimensions, the theorizations continue to overemphasize the cognitive and rational dimensions of reflection. Therefore, in order to reach an understanding of the nature of reflection and to conceptualize it more fully, I focused on the challenges and prerequisites of the emotional, social, and cognitive dimensions of reflection, and in particular the interrelations between these dimensions.

This chapter will summarize the theorization that has been developed in this research. The basis for the theorization is the analysis of both Mezirow's and Damasio's theories, explicated in Study III in more detail with regard to the conceptual and methodological issues. The building blocks of the theorization are Mezirow's concepts of reflection, meaning perspective and disorienting dilemma, as well as Damasio's views on emotions and the connections between emotion and consciousness.

4.1 Emotions in orienting our thinking

Reflection is often regarded as part of the highest cognitive functions of humans; it is associated with meta-cognition, which refers to the knowledge of one's own mental functions. Furthermore, it is often conceptualized in an exaggeratedly cognitive form and, consequently, a human being is understood almost exclusively as a rational agent who observes and assesses his or her own thinking and acting. Emotions or feelings are often mentioned as the objects of reflection along with the cognitive aspects (see e.g. Hatton & Smith, 1995; Illeris, 2007; Kreber & Castleden, 2009; McAlpine et al., 1999; Mezirow, 2009; Tynjälä, 1999). For example, in Mezirow's (1991; 2000) transformative learning theory, the notion of reflection refers to becoming aware of and questioning our assumptions, beliefs and values within the meaning perspective, i.e. the set of assumptions, based on our previous experiences, that orient our thinking, feeling and acting. Although within recent years more attention has been paid on the emotional dimension of reflection, most views regarding reflection nevertheless appear to be based on an idea

of cognition as an isolated, “highly developed” component that is detached from the biological and emotional base of a human organism (see also Wilson, 1998).

In the following, however, I will argue that the very process of reflection is by nature inherently inseparable from emotions, and thus linked to the biological base of an organism. Therefore, in reference to Antonio Damasio’s (1944–) thoughts on emotions and consciousness, I will first briefly discuss the nature of emotions in connection with the biological base of a human organism as such, as well as the connection between emotion and cognition. After considering Damasio’s concept in brief, I will introduce the terms *comfort zone* and *edge-emotions* that are at the heart of my theorization of the nature of reflection. I have formulated these terms, in the sense in which they are used in this research, based on analyzing Damasio’s ideas parallel to Mezirow’s position.

The basic functions of emotions

With the biological basis, I refer to the reactions and mechanisms necessary for survival. They orient us in the avoidance of danger, away from threatening situations and towards the search for safety, nourishment and comfort.⁹ According to Damasio (1994; 1999; 2003; 2010), these basic tendencies operate through emotions, and we use feelings as indicators of the suitability and safety of the environment. By nature, we wish to reject both the emotions that we experience as unpleasant and the situations in which these emotions are aroused. Correspondingly, we embrace the situations in which we feel comfortable and safe, and in which we experience ourselves and the world as comprehensible. If we did not have this kind of biological orientation through emotions, we would not be able to survive and to adapt to our environments. For example, we would not automatically be wary at the edge of cliffs, and we would not be able to watch out instinctively e.g. for rapidly approaching objects such as vehicles. Furthermore, we would not be able to harness all our capacity to fight or flee from immediate danger. Indeed, our conscious capacity would not be capable of such quick reactions (see Brewin & Holmes, 2003). That is to say, our bodies carry an understanding of the fundamental issues for survival. The biological basis contains the mechanisms that produce the most fundamental reactions through emotions. (Damasio, 1999; 2003; 2010; Wilson, 1998.)

Furthermore, consciousness helps survival by providing us with higher cognitive functions such as anticipation, planning, imagination and problem solving. Although emotion and cognition have often been considered as being opposite

⁹ Naturally, human life involves other dimensions and values than that of mere survival. In terms of the analysis of the challenges and prerequisites of reflection, the considerations are, however, limited to these fundamental processes ensuring life is maintained, in order to conceptualize the nature of reflection and its connection to emotions at the basic level.

to one another, emotions also play a role in the construction of consciousness (Damasio, 1994; 1999; 2003). Brain research has revealed that cognition and emotion are, in fact, inseparable: the most sophisticated actions of problem-solving and decision-making would not be possible without emotions (Damasio, 1994; 1999; 2003; 2010). In essence, without emotions, we would only be able to carry out purely logical calculations, and everyday problems and decision-making situations very rarely are purely logical.

The above notions of Damasio (1994; 1999; 2003; 2010) offer an understanding concerning the basic functions of emotions, as well as the constitution of consciousness through emotions. Although Damasio discusses the prerequisites of survival in general, he does not consider these regarding consciousness. In other words, Damasio does not analyze the mechanisms that ensure the fluency of the processes of consciousness – in a more practical sense, the issues in our everyday lives that threaten the intactness of the structures of consciousness, nor how we may respond to these issues in order to protect the structures. These questions relate to the prerequisites and to the possibilities of a change in these structures of consciousness, or meaning perspectives¹⁰, and they are also essential with regard to reflection. These issues, which Damasio has not considered within his theory, are central to my formulation of theory. They may be reached through a synthesis of the ideas of Damasio and Mezirow, as will be explained in the following.

Comfort zone and edge-emotions – The experiential dimension of the meaning perspective in protecting the structures of consciousness

Damasio's view above involves considering how, on the biological and physical level, human beings are capable of automatically defending themselves, through being biologically oriented by emotions. In addition, Damasio considers how, through consciousness, we have the higher order cognitive functions that further support survival and adaptation. However, in my view, these higher order cognitive functions are no more immune to the challenges of life than our bodies are. Based on my analyses in Study III, as an elaboration or expansion of the above ideas of Damasio, I suggest that also consciousness involves its own protection mechanisms. More specifically, I suggest that the biological life-support system, which functions through emotions and the automatic orientation of attention, also supports the coherence of the structures of consciousness, i.e. the meaning perspectives. In fact, as emotions play a part in the construction of consciousness, it appears that the consciousness must also be affected by the basic logic of emotions that function through positive and negative tones as reactions to safe and threatening situations. As the meaning structures or meaning perspectives

¹⁰ Based on the analyses in Study III, Damasio's and Mezirow's views in terms of these structures of consciousness may be seen, to a large extent, to be congruent.

bring continuity to the consciousness, ultimately supporting regulation through cognitive functions, I suggest that challenging this continuity indicates a threat to the functioning of the organism. Thus unpleasant emotions indicating this are aroused, in the same way as, according to Damasio (1999; 2003; 2010), the emotions are aroused in cases of physical threat¹¹. Correspondingly when nothing threatens the continuity, coherence and intactness of the meaning perspective, we do not experience these unpleasant emotions, but rather feel ourselves comfortable and untroubled.

These emotions indicating the emotional dimension of the meaning perspective I have termed *edge-emotions* and *comfort zone*, respectively¹². The terms intend to point out the ways in which the interpreting person actually experiences the functioning of the meaning perspective: *comfort zone* refers to the pleasant experience of being able to make meaning unproblematically within the meaning perspective and maintain the intactness of it; *edge-emotions* refers to the unpleasant feelings that emerge when we are unable to understand or when our meaning perspective becomes questioned. In other words, in these situations we are out of our comfort zone or at the edges of it.

The above view on the threats as well as the protection mechanisms of the structures of consciousness or meaning perspectives is concerned with the fundamental mechanisms of the human being and may, in fact, sound very dramatic as they embody the basic functions of emotions that are aimed to support survival. Nevertheless, I suggest that these mechanisms protecting the intactness of the meaning perspectives are very subtle, taking place in our everyday lives, and are often passed unnoticed. We may, in fact, be used to these indications and have learned not to pay attention to them. Rather, we may automatically consider them as self-evident human reactions. After all, they are the subtle mechanisms that ensure the ease and fluency of everyday living. However, from the viewpoint of reflection, they appear as a counterforce and bring about automatic resistance towards reflection.

¹¹ In psychotherapeutic literature, the emotional reactions are seen to respond both to external and internal threats. In therapeutic context, the referred internal threats that are discussed are most often, however, traumatic memories or other chronic disturbances that the person may be unable to cope with (see Greenberg & Paivio, 2003). In my treatment here, I aim to conceptualize the more general mechanisms that are associated not only to these traumatic instances but also to the functions of an everyday or “un-traumatised” mind. These basic dispositions of the structures of consciousness enable explaining the nature of meaning perspective in general, as it is later shown, in order to conceptualize the challenges and prerequisites of reflection.

¹² As explicated more in detail in Study III, this conceptualization is based on the elaborations of both Mezirow’s and Damasio’s view. The conceptualization enables bridging some of the gaps between the theories, as it explains issues between the domains of these two theories (see also Bacharach, 1989). Mezirow’s view on the orientation of interpretation through meaning perspective and Damasio’s view on emotions are used as bases to explore the way the meaning perspective is experienced by the interpreting individual.

More specifically, such issues that may activate the unpleasant edge-emotions by threatening the intactness, continuity and coherence of meaning perspective are, for example, the situations when our beliefs and long-held assumptions are being questioned, or the stability of our sense of identity is being challenged (see also Mezirow, 1991; 2000; 2009). Furthermore, we may experience anxiety and feel threatened by chaos in situations in which we are unable to cope with the environment, or understand what is happening within it or within ourselves. Consequently, we may feel anxiety and a lack of safety, as the events do not appear understandable in terms of our previous assumptions and experiences (see Mezirow, 1991; 2000; 2009).

Orientation towards maintaining the comfort zone

In addition, as any emotions (see Damasio, 1999; Greenberg & Paivio, 2003; Greenberg & Pascual-Leone, 2006), the comfort zone and edge-emotions do not only indicate the state of an organism in terms of the extent to which it is optimal, but also involve automatic reactions and tendencies in order to ensure regulation towards the optimal states or maintaining them. Based on emotions, we orient automatically towards avoiding danger and ensuring comfort and safety (Damasio, 1999). Emotions orient our attention regardless of our awareness of them (Damasio, 1999). Consequently, I propose that we are automatically oriented towards staying within the comfort zone, the pleasantness of which we regard as an indication of balance and safety. Thus we relax and believe that we are safe. Correspondingly, the unpleasant edge-emotions inform us of the meaning perspective being threatened. In the case of unpleasant emotions, we basically aim to avoid both the emotions as well as the situations in which they were aroused (Damasio, 1999; Greenberg & Paivio, 2003). Consequently, I suggest that when the edge-emotions emerge, our natural reaction is to try to return to the comfort zone and avoid the unpleasant emotions as well as the stimulus that aroused them.

Returning to the comfort zone may be seen to be possible by avoiding dealing with the unpleasant issues, or by interpreting them so they no longer appear to question our assumptions. For example, as was empirically illustrated by Study II, we may orient our attention to the familiar and safe routes, either forcing the previous scheme or explanation to the new situation, regardless of the actual fit; or, as Study I indicated, the current situation may be explained in such a way that the problem no longer appears to reside in our beliefs or action but rather somewhere else or in somebody else.

I suggest, in the cases of this kind of “mental emergency”, our sophisticated mechanisms of thinking are harnessed to protect our comfort zones. Consequently, in these kinds of situations our thoughts, interpretations and decisions often do not embody the optimal width, breadth and criticalness of our cognitive functions, but on the contrary are based on narrow, one-sided and purpose-oriented reasoning.

Thus, I propose that when our comfort zones are threatened, emotions orient our thinking first and foremost toward restoring *the experience of safety* and understanding of the world. The possible aim for understanding the situation becomes subordinated by the more fundamental aim of restoring the comfort zone: our interpretations are aimed first and foremost towards abolishing the experience of unpleasantness and of being threatened, by interpreting the situation based on previous experiences and habits, regardless of their actual fit to the situation. By these quick and familiar interpretations we produce order and feelings of safety into our world – in order to defend and fight mentally in favor of the intactness of our meaning structures.

The social dimension

The meaning perspective involves not only cognitive and emotional dimensions, but also a social dimension, based on its formation through socialization and being affected by culture and significant others (see Brookfield, 2000; Mezirow, 1991, 2000). More precisely, although the existence of the meaning perspective may be seen as a biological necessity for a conscious human being, the very form, breadth and flexibility it takes is partially socially and personally constructed. Furthermore, the meaning perspective may be seen to be the yardstick that, actually, determines whether a situation is experienced as unpleasant or enjoyable. Thus the meaning perspective and emotions may be seen to be interlinked both in the way that the emotions, in a metaphorical sense, produce the engine to the orientation of our cognitive functions created by the meaning perspective, as well as in how the socially-shaped meaning perspective determines the direction and tone of the emotions altogether.

In addition, the social construction of meaning perspectives may be seen to result in the intersubjectivity of the personal meanings, which then enables interaction, acceptance, and integration to groups and cultures (see Illeris, 2003; 2004; 2005; 2007; Mezirow, 2000). These social connections are maintained with the help of the shared meanings, and, on the other hand, the shared meanings become confirmed and are converted into acceptance as one thinks and feels along the intersubjective paths of thought and feelings within a certain group or culture (see Damasio 1999; Mezirow, 1991). Thus, in addition to the cognitive dimension of meanings, which includes continuity and understanding, also the bond between people based on shared meanings (on the social dimension of meanings) tends to be maintained with the help of emotions. Furthermore, as both the cognitive and social dimensions are anchored in the regulating emotional dimension, threats to the social dimension may also arouse the same uncomfortable edge-emotions mentioned above. For example, the edge-emotions may be aroused if the shared meanings become questioned or if something challenges one's membership in a significant reference group. Thus, the social dimension may be seen as oriented and guarded by the same supportive mechanisms of emotion and attention pre-

vously argued as related to the protection of the intactness of the structures of consciousness.

This emotional charge of the social dimension was evident in Study II. For example, in terms of grieving the loss of one's child, some of the involuntarily childless women had, at first without realizing it, held socially induced assumptions concerning the "proper" grieving time, during which one is expected to recover from the loss. They were not, however, able to live up to these expected standards. This had aroused unpleasant feelings and self-accusations. In this sense, the deviance from the socially expected script was literally experienced through the uncomfortable feelings (see also Brookfield, 2000; Sands & Tennant, 2010).

4.2 The challenges of reflection

As was suggested above, the fundamental function of emotions – to maintain life and ensure survival – operates also in terms of protecting the consistency of the structures of consciousness, manifested in our tendency to operate within the comfort zone. Correspondingly, when our comfort zones are challenged – that is, our beliefs or values are being threatened or questioned – unpleasant emotions are activated, in order to bring our thinking back to the comfort zone where we feel ourselves safe and comfortable and things as understandable and sufficiently normal.

In terms of reflection, this creates a paradoxical situation, since reflection – or becoming aware of and questioning the assumptions that govern our thinking – is precisely the kind of activity from which the emotions aim to protect us. The emotions orient our thinking automatically towards the familiar lines of thinking and away from the kind of viewpoints that may bring our worldview into question. Consequently, we have a tendency to end up reflecting only within the comfort zone, which means that our understanding of our actions, feelings and thoughts is naturally not becoming significantly deeper or increased. Based on both theoretical and empirical analyses (especially Studies I, III and V), I suggest that in reflection, we often end up "finding" only "harmless" first impressions, that is, ideas and assumptions that do not challenge our comfort zone. In these instances, the profound educational goals of reflection – increased awareness, transformative learning, development or change – may, actually, remain unreached.

On the other hand, becoming aware of these collectively and individually held self-evident assumptions may be difficult, as they maintain the conceptions of our selves and our surroundings that feel natural, understandable and comfortable. We may hold unjustified and limited beliefs without deeper considerations merely since they feel good to us: they are based on what has happened before, and therefore they appear familiar and safe (see Damasio, 1999; Mezirow, 1991). By leaning on these perceptions of previous situations, we create clarity and predictability to our world and experience (see Mezirow, 1991), and therefore it appears no wonder that we are not, through our emotional orientation, very eager to go ahead and

question and unravel these kinds of assumptions that bring about a sense of safety and continuity.

With regard to the social dimension, becoming aware of the taken-for-granted assumptions may be seen to be difficult, because the assumptions are a part of the everyday understanding that becomes strengthened as we act together with other people who share similar assumptions (see Brookfield, 2000). In this sense, merely locating the assumptions may be difficult. In fact, within the communities and groups of like-minded, these shared assumptions help to maintain relationships and reference groups (see Mezirow, 2000). As was illustrated by Study II on involuntarily childless women, the questioning of assumptions may bring about contradictions in our relationships, or even risk our memberships within the groups. Furthermore, based on an empirical study on adult educators, Brookfield (1994; 2006) suggests the term cultural suicide in reference to this risk entailed by reflection.

As was previously suggested, the threats to the social dimension arouse the unpleasant feelings in order to support the comfort zone and the intactness of the prevailing assumptions. Consequently, the absence of this kind of threat is experienced as comfortable feelings that we automatically tend to maintain. Therefore, within groups of like-minded, there may be seen to emerge a collective comfort zone, an implicit understanding of what are appropriate topics to discuss and what kinds of lines of thinking are considered normal or acceptable. While this may strengthen the unity within the group, it also limits the variety of thoughts that may be created within the group. As there is an emotionally-oriented tendency towards maintaining the comfort zone, and thus also the shared assumptions that bind us to the like-minded, a question of utmost importance is *whether reflection is oriented by the need for social acceptance and integration or the need to understand one's experience*. In other words, we may end up, in reflection, to find only assumptions that do not threaten the social connections that are at that point considered significant. Thus we may deliberately intend to reflect and question our assumptions, but are already oriented away from certain viewpoints and issues.

Hence, at the most fundamental level the counterforce to reflection is not the mere unwillingness to change or the effort this requires, but the life-support system that attempts to maintain the functions of an organism within a relatively narrow range. If one was able to reflect unrestrictedly, deconstruct and reconstruct one's meaning perspective with no inhibitions, one would not be able to maintain the basic coherence of the structures of consciousness that also includes one's sense of self (cf. Damasio, 1999; Illeris, 2007; Mezirow, 2000). Thus, ultimately, a counterforce to reflection is actually necessary in order to maintain the consistency of the structures of consciousness. Furthermore, by reflecting unrestrictedly, one would be questioning also the shared assumptions that bind one to the like-minded. Thus from the social viewpoint, the counterforce to reflection also supports maintaining the relationships and one's integration to one's reference groups.

In summary, the counterforce or resistance to reflection is essentially a question of the mechanism that enables us to maintain, first, the feelings of comfort and security (emotional dimension); the coherent worldview and understanding new situations based on earlier experiences (cognitive dimension); and third, the integration and acceptance in reference to significant others (social dimension). The life-support system oriented by emotions thus may be seen to play a part in ensuring the coherence and continuity of the socially constructed structures of consciousness. This mechanism forms a counterforce to reflection, which, quite the contrary, aims to become aware, assess and possibly change the very assumptions that are the bases for the fluent processes of consciousness. In other words, the challenges of reflection are basically a question of the mechanism that protects the intactness and consistency of the structures of consciousness – the meaning perspectives.

This protection mechanism of meaning perspectives is manifested, on the one hand, in the way our attention is automatically oriented away from the impulses that may question the meaning perspectives. On the other hand, it is visible in the way unpleasant feelings are aroused when our assumptions and habits of mind have become questioned. Our natural tendency to orient towards the comfort zone supports the maintaining of the coherence of the structures of the consciousness, as well as the shared meanings that bind us with the like-minded. However, from the viewpoint of reflection, this tendency creates a challenge to the kind of learning that not only aims to increase knowledge into prevailing meaning structures but would aim to become aware, question and reassess the validity of these assumptions – and possibly to formulate new ones as a consequence, as would be the case in transformative learning according to Mezirow (1991) or in any genuine adult learning according to Malinen (2000; see also Illeris, 2007).

Therefore, in order to understand the challenges of reflection, there is need to acknowledge the human as a bodily agent, and to consider how this biological starting point affects also the higher-order cognitive functions. Furthermore, as is indicated by the intertwined nature of the cognitive, emotional and social dimensions, the counterforce to reflection is formed also through our tendency to maintain our social connections and avoid risking them, which is also manifested in our tendency towards maintaining the comfort zone.

4.3 The prerequisites for actualizing reflection

The above considerations indicate that we may not be able to carry out reflection – according to the idealized conception – in the manner of purely rational agents, and actualizing reflection may not be easy. This is not to say, however, that carrying out reflection would be impossible and totally out of our reach. On the contrary, the above conceptualization may be seen to open up new perspectives to consider the prerequisites for actualizing reflection as well. Based on both theoretical and empirical analyses of my research, I suggest that the complex in-

terrelations between reflection and emotions not only bring into view the challenges to reflection, but involve possibilities for actualizing reflection as well. In this chapter, while keeping in mind the conceptualization of the challenges offered in the previous sections, I will discuss the ways in which carrying out reflection may be possible.

First I will suggest a re-conceptualization of Mezirow's view (1991; 2000) of the trigger for reflection, that is, a disorienting dilemma, a life event crisis, or more cumulative set of instances that has aroused discontent with previous meaning perspectives. In contrast to this notion, however, in the educational contexts of facilitating reflection the participants are – fortunately – not often in the middle of experiencing this kind of extensive internal discrepancy that would have already triggered reflection. Therefore, after considering disorienting dilemma from a new perspective, I will discuss issues related to prerequisites of actualizing reflection and facilitating reflection in a case where there is no such disorienting dilemma already taking place. In my view, through considering the prerequisites of reflection in non-facilitated context in association with a disorienting dilemma, further understanding may be reached also in terms of facilitating reflection in “normal contexts” in which no crisis is taking place.

Emotional dimension of the disorienting dilemma

Within Mezirow's (1991; 2000; 2009) theory of transformative learning, a disorienting dilemma is presented as the trigger for reflection. Disorienting dilemma refers to a life event crisis, or other more cumulative set of instances that has led one's assumptions to appear problematic. However, as was argued earlier, assumptions becoming problematic represent a challenge to one's comfort zone, thus arousing unpleasant edge-emotions. Therefore, I suggest that a disorienting dilemma is first and foremost an emotional matter, as problematic assumptions are masked by the edge-emotions. Consequently, one may experience and reach the disorienting dilemma that triggers reflection only through these emotions. Study II, which discusses involuntarily childless women offers insights regarding these issues.

Crisis usually involves an acute emotional strain (Kübler-Ross & Kessler, 2005; Greil, 1997; Matsubayashi et al, 2001; Saari, 2003; Salzer 1991). Furthermore, reflection has been portrayed above as a challenging process, which can actually be restricted through emotions. From this perspective, it may not be evident how a disorienting dilemma or crisis may in fact lead one to reflection, to a critical consideration on one's assumptions. In fact, as was discussed in Chapter 1, there are several scholars who maintain that bringing about reflection in educational settings is difficult. Therefore, how could reflection be any easier in a state of extreme stress generated by the strains of a crisis?

Examining how the concept of reflection emerged in the interviews with involuntarily childless women offered some perspectives into this complex issue¹³. First, as was suggested above, the emotional orientation of meaning perspective creates a tendency to avoid dealing with questions that may threaten one's prevailing values and sets of assumptions. However, in the case of the involuntarily childless women, it appeared that along with the accumulation of unpleasant experiences in association to the crisis, *the weight of the previous meaning perspectives decreased*. At the same time, the inhibition to perceive and access new viewpoints also decreased: the viewpoints that would not have been committable from the previous perspective, begun to appear as possible and relevant paths of thinking.

On the other hand, this may be seen as a way of decreasing the distress in the first place. As the situation was continuously painful and chaotic, the unpleasant feelings in a way moved one into a position from which becoming aware of previously unquestioned assumptions and viewpoints may appear *as partial relief* to the painful situation. That is, it enabled one to conceptualize and make meaning to the situation that up to then may have been emotionally chaotic and without "labels" matching one's experience. The prevailing negative feeling may be experienced as more painful than the pain of questioning one's assumptions which previously may have been automatically neglected.

This may be seen to embody an attempt towards the comfort zone, which, in this case, was possible *through* reflection. In contrast, the instances questioning one's meaning perspective in everyday-life are often subtle and easier to bypass. However, in the case of involuntarily childless women, it is evident that the painfulness of the situation may be more persistent in the sense that although one may have, at first, formed artificial interpretations of the situation in order to maintain one's comfort zone and go on with one's life, the pain has not disappeared. Therefore, as the unpleasant feelings continue, one's relation to the previous meaning perspective alters as well. As the unpleasant feelings intensify, they become more difficult to neglect than in the everyday situations where they take place in more subtle ways.

Consequently, the mere acceptance of these preponderant negative feelings may be seen to entail an implicit understanding that there is something wrong. This unpleasantness may either be explained as the "fault" of someone else, or the reason residing in somewhere outside (see Mezirow 2000), or it may orient an individual to seek alternative ways of making sense of the situation.

¹³ The analysis focused on the instances in which one had already ended up reflecting (see Study II). Thus it is not to say that these kinds of emotionally chaotic situations would necessarily lead one to make meaning to one's experience through reflection. As Mezirow (1991) indicates, in case of vacuum of meaning we may, as well, turn to tradition or pre-set ideologies as sources of meaning. These alternative ways of making meaning may also be seen to enable one to make some kind of sense of the situation, as well as relieve the painfulness of it. With regard to my elaborations here, the essential issue is the nature of the reflection that already has taken place, and what that indicates of the interconnections between cognition and emotion.

In the latter case, reflection may be seen as a way of enabling making sense of this chaotic situation: one may reach an understanding of one's previous meaning perspectives and the ways in which their incapability to explain the situation partly forms the unpleasant experience. Acquiring understanding of the sources of the unpleasant feelings may be seen as a route to bring about a certain amount of understandability to the situation, even though one may not make meaning of the situation based on previous understanding similarly as one would within the comfort zone. As a result, it enables one to reconsider the expectations and values that one may have held uncritically. On one hand, this may enable one to form new meaning that is more context-sensitive yet stemming from one's values. These new sets of meaning structures may be more capable of managing one's daily life. On the other hand, forming a more context-sensitive understanding may keep one from drifting too far away from contextual understanding, and the crisis this may lead to.

To conclude, I suggest that "assumptions becoming problematic" is not a trigger for reflection as such, but rather that disorienting dilemma is experienced through unpleasant feelings. Furthermore, reflection on assumptions may become possible after accepting these feelings as an indicator of the problematic assumptions. In everyday life, we are capable of bypassing these unpleasant emotions, as they are not so enduring. As for crisis, however, the painfulness of the situation is evident and difficult to ignore. This acceptance and recognition of the unpleasant feelings may be seen as the first step towards reflection. After this, it is a matter of what kind of meaning or explanation one attributes to these emotions – that is, whether one considers only those issues that are external to oneself, or whether one also explores his or her previous assumptions as a contributing factor to one's experience. On the other hand, one may take up reflection also by questioning one's attitude towards these feelings.

Edge-emotions as seeds for reflection

Although the previous theorization on the challenges related to reflection indicates that becoming aware of our beliefs and assumptions and assessing them is not easy or unproblematic, that is not to say that it would be impossible. Quite the contrary, the theorization above may be seen as also offering indications of actualizing reflection in those contexts in which disorienting dilemma does not readily prevail.

In short, actualizing reflection may be seen to require that one is able to utilize as seeds for learning edge-emotions, which indicate a strain in the meaning perspective¹⁴. That is to say, the essential question is one's relation to these emotions;

¹⁴ By the term edge-emotion I intend to bring into view the ways in which the complex nature of emotions is manifested in everyday instances. In other words, it is important to discern them from the ways in which emotions are activated in cases of actual danger (see Damasio, 1999) or the fear that we may feel with regard to considering traumatic memories (see Greenberg & Paivio, 2003; Grossman, 2007; Litz, 2007; Palosaari, 2007).

whether after experiencing edge-emotions one is oriented automatically to avoid dealing with problematic assumptions, or whether one is able to relate to these emotions as an experience itself that may be understood. As a result, by attending to these emotions and exploring their bases, one may be able to reach the assumptions that became problematic in the first place. This, however, requires that one is able to accept the unpleasant emotions as indications that one's assumptions have become problematic.

This possibility to affect one's own attitudes and reactions brings into view the fact that although our cognitive functions are in significant ways affected by the biological basis and emotions, our behavior and thinking are nevertheless not exclusively determined by the biological basis. Rather, the intentionality entailed by our cognitive capabilities offers us the possibility of affecting our own attitudes and reactions (see Damasio, 2010).

In everyday life, we create order to the world and coherence to our understanding as well as free our resources by routines, habits and repeated lines of thinking, and by assumptions that we come to take for granted (see Mezirow, 1991). After a while, the predictability, the sense of being in control and understanding brought by these patterns become channeled into a feeling of security (see Damasio, 1999). Correspondingly, the reverse side of this appears to be a sense of insecurity when these patterns are threatened. In other words, giving up these habits may feel alarming and daunting, as if there were nothing but frightening chaos outside these patterns, since we would have to form new paths in which to seek comfort.

Realizing the effects of these human departure points may be seen to be the key to actualizing reflection. Actualizing reflection requires recognizing these emotional "sheepdogs" and dealing with them, in order to become aware of the taken-for-granted assumptions that are sheltered by these unpleasant emotions. That is to say, in my view feelings are not only an object of reflection along with interpretations, attitudes, inferences and presuppositions, but first and foremost a gatekeeper on the way to becoming aware of the self-evident aspects in our world-view and thinking. It may be seen that the self-evident assumptions are in a sense hiding behind these unpleasant feelings, and on the other hand, the unpleasant feelings are aroused due to the fact that these assumptions have, in the everyday instances, become questioned, unreliable or problematic. Therefore, reflection may be seen to presuppose *recognizing this pattern of reactions*. It may become possible through accepting these unpleasant feelings and opening oneself up to considering the impulses triggering them, which, however, are not often rational explanations. In essence, discerning this pattern may bring in its wake perceptions of our imperfectness and irrationality. From this perspective, the most essential thing is not depicting the correct presuppositions – if such exist – but to realize that the interpretations we assumed to be rational are oriented by the emotional reactions aiming to protect our comfort zones.

Furthermore, although we may purposefully intend to reflect, it is often difficult to get started and to sketch what to reflect on. From this perspective, the

edge-emotions may be seen to offer a concrete starting point. In everyday activities, we often encounter situations that take us outside our comfort zone and we may experience unpleasant emotions in quick impulses. In many cases, beneath our stable exteriors different splashes and surge take place that would, in fact, be important sources of learning, departure points for increasing awareness or reflection as they reveal and make accessible the human emotions and the assumptions that guide our behavior.

Our natural readiness to face and work with these feelings, experiences and influences is significantly affected by our cultural expectations concerning what is appropriate to feel and experience, and what are proper issues and viewpoints to talk about. In other words, our social environment and culture affects our reflective potentials also indirectly by shaping the nature of our meaning perspectives in terms of attitudes such as flexibility and openness to both questioning and new outlooks – that is, what is implicitly considered to be “normal” in a given culture (see Mezirow, 2000). For example, through socialization we may have become accustomed to assume that our consciousness would function detached from the more primitive life-support systems, or that our capability for rational thinking would indicate that we are exclusively rational. These kinds of assumptions may make it more difficult to acknowledge and utilize the edge-emotions as seeds for learning, as one may – in order to protect one’s comfort zone – wish to ignore the effects of the biological basis to one’s cognitive functions.

Finally, the tendency to create against our unpleasant feelings, excuses and explanations that are detached from ourselves may be seen to have some of its origins in the fact that biologically, according to Damasio (1991; 2003), we rely on our feelings to determine whether the environment is safe and suitable for us. However, our comfort zones recognize as a threat any impulse or demand that threatens its consistency and continuity by questioning our assumptions, values and sense of identity. On the other hand, in our culture, we may have learned to neglect recognizing and dealing with these kinds of feelings and reactions. Therefore, we may base our explanations of our behavior on first impressions that both protect us from facing our imperfectness and produce socially accepted explanations to situations.

Facilitating reflection

With regard to facilitating reflection, a few inferences may be suggested based on the above theorization, although these issues were not at the focus of this research. The social influence may also be used to support of reflection, in an environment where the community expresses explicit support towards, and acceptance for, both producing challenging viewpoints as well as the incompleteness necessarily revealed while questioning one’s assumptions (see Greenberg & Paivio, 2003; Malinen, 2000; Mezirow, 1991). In this, the emotionally-experienced risks of reflection are in a way compensated for, by a special social environment that excludes

the social risks and at the same time provides emotional support for facing incompleteness (see also Brookfield, 1994; Mezirow, 1991; Malinen, 2000; Greenberg & Pascual-Leone, 2006).

In terms of facilitating reflection, the notion of a disorienting dilemma as a trigger for reflection often raises concerns of the ethicality of this kind of pedagogy. Namely, it is often questioned what right may any educator have to intentionally bring about discrepancies and stimulate their students' questioning their on-going ways of living, the consequences of which are not possible to determine beforehand. Any viewpoint on facilitating reflection does not, naturally, take away the need to consider these ethical questions. However, in my view it is possible to stimulate reflection from a milder perspective by focusing on the subtle "mini-crisis", or instances of edge-emotions, that take place in our everyday lives, and we can utilize these as seeds for reflection. As these are very personal in the sense that an educator may not know what kind of situations have raised edge-emotions in each learner, the educator cannot point these out for the student or set demands for the student to consider certain pre-determined issues.

Instead, it would be important that the educator supports creating a safe and accepting atmosphere (see Malinen, 2000; Mezirow, 1991), whilst acknowledging the way in which his or her predispositions and attitudes contribute to it. It is equally important to introduce the general theorization on the nature of reflection and edge-emotions, and to offer examples on how our interpretations, based on edge-emotions, may be oriented towards the comfort zone with regard to the course topic. The nature of these instances could first be considered on a general level, and the learners may learn to use the theorization as an analytical tool to examine different examples. As the theorization explicates the dynamic of our limited interpretations in protecting our comfort zones, the learners may be more open towards acknowledging these limitations in their own thinking. While explicating both the origin and the experience of these very tendencies, the theorization can bring about social acceptance and understanding concerning the experiences one might otherwise automatically avoid. It would then be up to the students to identify, from their own experiences, instances of them protecting their comfort zones or experiencing edge-emotions, as sources for their personal reflection.

Furthermore, in cases when assessment is involved, the teacher's own attitude becomes even more significant, as the students may be oriented towards "finding" socially acceptable assumptions within reflection – in this case, the teachers' expectations, as they, in the end, determine the students' grade.

To conclude, utilizing edge-emotions as seeds for reflection is not a matter of merely learning to bear the unpleasant feelings. Rather, it is a question of learning to detect in one's own thinking their tendency to orient our interpretations in favor of maintaining the comfort zone. Consequently, by accepting these unpleasant feelings, it may be possible in a more wide-ranging sense to explore the questioned assumptions behind them. Nevertheless, it is important to notice that edge-emotions do not, in any straightforward manner, indicate that the assump-

tions should be changed as such (see also Mezirow 1991). Instead, edge-emotions may be viewed as a stimulus to consider their sources, rather than to automatically be oriented towards avoiding of them. Furthermore, these sources, as illustrated in Studies I and II, may be related to taken-for-granted assumptions, concerning oneself, the others or the context.

5 METHODOLOGICAL SOUNDNESS

The aim of this research was to theorize the prerequisites and challenges of reflection. For this purpose, I utilized different methods, data and viewpoints, in order to reach an understanding of the nature of reflection, and more specifically, of the challenges and prerequisites of reflection. This chapter considers the methodological soundness of the research process, i.e. the methodological questions pertaining to the central choices that the research involved (see Brookfield, 1992; Malinen, 2000). First, I will consider general questions regarding both the research in its entirety and the different perspectives involved, in terms of aiming for theory development. The next section examines questions pertaining more specifically to theory development. The chapter ends with further considerations on the nature of the theorization, as well as its location in terms of the wider field of academic research.

5.1 General considerations on the multifaceted approach in aiming at theory development

The central aim of the research was to contribute to further understanding of the challenges and prerequisites of reflection, in a theoretical form, by building a conceptualization of the nature of the reflection. During the research process, it appeared useful to adopt a more varied approach involving both empirical and theoretical analyses, and to examine reflection in different contexts. This chapter addresses questions that are associated with this multifaceted approach that characterizes the research in its entirety.

Metatheoretical orientation framing the overall research

As briefly reviewed in Chapter 1, the previous research associated with reflection appeared to involve critique on different levels of research: there was criticism of both empirical research and theory, as well as problems with methodology, conceptual issues and connections to theory. Therefore, I considered it important that while aiming to look for new ways to come to a deeper understanding of reflection, it was also essential to pay attention to the methodological issues, especially in terms of the interconnections between the theory and methodology. In order to obtain a better grasp of the entire field of research and consider the implicit assumptions within, I considered the previous scholarly research on reflection by adopting a metatheoretical (see e.g. Gjerstad, 2009; Ritzer, 2007) approach. I decided on this methodology in order to point out implicit assumptions in studies as well acknowledge their results and limitations as is discussed in Chapter 1. In brief, the issues covered were as follows: 1) The previous research on reflection, 2) The previous

criticism of the empirical studies on reflection concerning conceptual, theoretical and methodological issues, 3) Mezirow's theory and the criticism it had received.

After exploring these issues, I examined them in parallel and proportioned the analyses to each other. On the one hand, based on these analyses, I could detect an unexamined area that appeared linked to most criticism aimed at the research into reflection. On the other hand, these analyses enabled me to get a better grasp of the research field including both explicit and implicit understanding on the nature of reflection. Within the light of these perceptions, I specified the aim of my research as well as sketched the choices concerning both the methods and the contexts in which to examine reflection. These choices are thus based on the all-round analyses of the field (see Chapter 1 and Sections 5.1–5.3). Furthermore, as I was conducting research, I continued to consider these different issues in relation to both my specific analyses and to the choices I was making during the research. This helped me identify and explicate my presuppositions, as well as to consider and strengthen the interconnections between the philosophical assumptions, methodology, theory and empirical research, in aiming for the alignment of the overall research frame (see Brookfield, 1992; Leshem & Trafford, 2002; 2010; Trigg, 2001).

Five studies offering different perspectives on reflection

This research involved five studies that each approached the research question from different perspectives. From the point of view of the overall research, they each contributed to the understanding of the nature of reflection. At the same time, these studies may, however, be seen as separate scholarly studies that are linked to different academic discussions (higher education and the pedagogical development of university teachers; adult learning and crisis learning; Mezirow's transformative learning theory; military pedagogy; and the concept of friction in military theory). Furthermore, each study involved its own research questions relevant to the specific analysis.

Participating in these different academic discussions made it possible to considering issues of reflection within the light of different spheres of academic knowledge. On the one hand, these context-specific examinations brought into view the universality of the theorization (see Bacharach, 1989; Brookfield, 1992; Malinen, 2000; Whetten, 1989), as it was possible to consider the relevance of the conceptual issues from the viewpoint of a particular context. On the other hand, the studies enabled shedding light on the context-specific features of the phenomenon: particular issues appeared especially relevant for particular contexts, or, depending on the context, they appeared in a different light (see Bacharach, 1989; Whetten, 1989). Furthermore, as the studies consider the central theme of the research from such different viewpoints, as well as with respect to different data and contributing to the discussions in the different fields of research, the final results of the research may be seen to become anchored to a more varied basis than would have been possible by conducting the research only along the lines of prevailing

research on reflection. In essence, the peer review process of the international academic journals guaranteed that the articles were, while this research process was still ongoing, evaluated for their relevance and intellectual soundness especially from the viewpoint of the given field of research. The feedback from the reviewers was used in order to revise the articles. This means that the studies were exposed to scholarly critique during the research process, and developed further based on that feedback. This brings about a more sustainable basis for the overall research that is based on the examinations of these five studies (see Brookfield, 1992).

Dialogue between theoretical and empirical approaches

As was argued in Chapter 1, the previous theorizing on reflection may be seen to lack sensitivity to the complexities of the empirical reality in terms of reflection. In my view, for example, the prevailing theoretical discussion does not offer conceptual tools for examining further the problems concerning facilitating reflection that several scholars (see Bleakley, 1999; Brookfield, 1994; Ecclestone, 1996; Jokikokko, 2009; Järvinen, 1990; Kreber, 2004; McAlpine, et al. 1999; Procee, 2006; Taylor, 2007) have brought out. Therefore, I considered it important to utilize both empirical and theoretical analyses in the theory development.

Two of the five studies were based on analyzing empirical data. The data for Study I consisted of the interviews of 76 university teachers. Seventy-one interviews were semi-structured whereas five of the interviews were unstructured and open. The data for Study II involved rather in-depth and open interviews with four women who were childless involuntarily.

My approach in these empirical studies was neither data-driven nor theory-driven as such, but a combination of the two: I aimed to explore empirically, in a data-driven manner, the aspects of the phenomenon that through theoretical examination appeared to be insufficiently theorized (see Layder, 1998). Thus, the aim was to explore, with regard to specific theoretical questions, the complexities of the empirical reality (Brookfield, 1992; Layder, 1998; see also Van de Ven, 1989) often ignored within the educational theorizations (see Peltonen, 2009).

The dialogue between the empirical and theoretical analyses took place in different phases of the research. First, I determined the viewpoints of the empirical analyses of Studies I and II based on theoretical analyses. That is to say, by analyzing previous empirical research as well as previous theorizations on reflection, I diagnosed particular conceptual issues that were both relevant to my research questions and insufficiently considered within previous theorizing on reflection, as well as ignored by the empirical studies. These issues then became the focus of the empirical analyses. The empirical analyses therefore aimed to explore the issues insufficiently considered in previous theoretical discussions.

For example, in Study I, the focus was on an issue that is often taken for granted in the prevailing discussions on university teachers' pedagogical growth: the relation between reflection and action. That is to say, the reflection-based views of

university teachers are often implicitly assumed to be applied in practice as such, without requiring further consideration on the conditions of it. Correspondingly, Study II focused on the relation between the disorienting dilemma and reflection, in reference to Mezirow's notion of the trigger for reflection. In cases where Mezirow's theory is being researched or applied in practice, this conceptual link is referred to continuously. Most often it is, however, being taken as an established fact stipulated by the theory, instead of exposing it to further examination and scholarly debate (see also Whetten, 1989; Van de Ven, 1989). Consequently, the aim of Study II was to explore more deeply how a disorienting dilemma actually may or may not trigger reflection.

In addition to this, I brought the insights of the empirical studies into dialogue with my theoretical elaborations in different phases of research. I used these insights to challenge the emerging theorization, by presenting empirical issues and new viewpoints up to then not considered within my theorization. In further examinations, I considered these issues from the perspective of the emerging theory, and I aimed to develop the conceptualization so as to also take into consideration the issues indicated by the empirical data. In this sense, the two empirical studies (Studies I and II) could offer an empirical basis for the issues considered within my conceptualization (see Brookfield, 1992; Layder, 1997). Furthermore, the research process was not divided into clearly separated phases of theoretical and empirical analyses but these two phases were, to some extent, taking place simultaneously. Thus my interaction with the empirical data and considering questions of empirical research affected the theoretical elaborations also indirectly, by improving the flexibility of my thinking as I was processing the empirical issues alongside the theoretical.

Third, conducting empirical and theoretical analyses simultaneously enabled me to obtain a broader picture of the research on reflection, as well as to strengthen the methodological soundness of my research. Namely, due to conducting empirical analyses, I familiarized myself with the previous empirical studies, and also pondered the methodological choices made in those studies, in order to determine my own ways of conducting both the interviews and the analyses. Correspondingly, due to conducting theoretical analyses, I orientated myself to the previous theoretical debates and aimed to get a thorough grasp of the issues and viewpoints under discussion. Gaining a feel of both of these perspectives opened up new possibilities for considering how the inter-connections between the two perspectives manifest in the previous research. For example, I aimed to detect methodological limitations and to consider how these limitations may be channeled into the viewpoints and issues regarding reflection. Furthermore, this strengthened the alignment of the methodological assumptions, theory and empirical data in my own research, as I could now better consider both the empirical analyses and the methodological issues from the viewpoint of theory, and correspondingly, contemplate the issues of theory development in terms of both my empirical studies and the previous empirical research.

Examining reflection in different contexts

By examining reflection in different contexts, my objective was to reach a more comprehensive understanding of the phenomenon (see Brookfield, 1992; Malinen, 2000). In this way, I was able to develop the conceptualization through getting an understanding how particular theoretical issues are manifested either in a similar or a different light, according to the context (see Whetten, 1989). As was mentioned in Chapter 1, the choice of the three different contexts (university teachers' pedagogical development, involuntarily childless women recovering after a crisis, a soldiers preparing for and recovering from a crisis) stemmed from considering the questions that, based on Mezirow's (1991; 2000) theory, appeared relevant in terms of reflection. Namely, Mezirow (1991; 2000) indicates that either a life event crisis, or a more moderate growing sense of dissatisfaction with one's meaning structures, serves as a disorienting dilemma that may trigger reflection. In this sense, a crisis may be seen as a context in which reflection may emerge more naturally, whereas reflection is often being promoted in educational contexts in which the trigger conditions may not readily prevail. However, these contextual issues, as well as the differences between the facilitated and non-facilitated contexts, have not been analyzed in detail within the research on reflection (or transformative learning).

Both involuntary childlessness and the military contexts represent in their way extreme spheres of human life not necessarily directly associated with the more general questions of adult learning. Within my doctoral dissertation, however, these contexts were not the main focus. Rather, my intention was to examine reflection in these contexts, in order to grasp the phenomenon from different perspectives, so as to increase the understanding of reflection in educational contexts.

In addition to offering insight into both to the facilitated and non-facilitated contexts of reflection as well as the relations between the two contexts, the choice to examine reflection in different contexts offered other advantages. For instance, in each of these analyses, particular issues emerged as the prominent features of the given context. These new viewpoints could then be utilized in terms of other contexts as well, which prompted me to raise new questions concerning the data unlikely to find otherwise. In essence, I could utilize the insights of previous research in each of the contexts in comparison with my own examinations in these in order to explore deeper into the nature of reflection. Since the links between the different contexts had already been established by the common theoretical core that oriented each of these context-specific studies, I could then consider the interconnections between the issues that stemmed from the different contexts.

5.2 Considerations on theory building

In determining the various ways of working in theory development, I considered it important to aim to develop theory by building on the basis of earlier theories. Mezirow's theory formed the starting point and the base for my research. In later phases of my research, it appeared necessary to utilize complementary theories that would offer an understanding of the dimensions important for my research question but not considered within Mezirow's theory. In the following, I will first consider the selection of the theories, as well as the issues related to building theory on the basis of earlier theories. After that, I will discuss the questions pertaining to utilizing more than one theory in theory building.

Selecting the theories

In selecting the previous theories that would serve as a basis for the analyses, the most important criterion was naturally the relevance in terms of my research question. I did not, however, choose these theories during the initial phases of the research (see Malinen, 2000), but proceeded according to the evidence that emerged from the analysis. For example, I chose to utilize Damasio's theory as a complementary theory only after examining Mezirow's theory in more detail. In essence, I carried out several rounds of analysis on Mezirow's theory. The viewpoints of each of these rounds were based on the results of the previous round. The result was that I ended up considering the theory from perspectives I could not have been able to determine beforehand. After these rounds of analysis, I arrived at the conclusion that despite the fruitful elements Mezirow's theory appeared to involve, it was limited in terms of the particular issues important for my research question. Therefore, I decided to search for a theory that would offer an understanding specifically in terms of these issues.

Besides the relevance, another central criterion for choosing a theory was that it was scholarly approved as a valid theory in its own sphere. In this sense, it would represent the best possible existing knowledge on the issue. Naturally, however, it is to some extent always possible that a line of inquiry exists somewhere that has already addressed these questions (see Brookfield 1992). Given these limitations, my aim was to utilize the best possible current knowledge of the issue as the starting point for theory building:

Mezirow's theory has inspired research and practical applications since the end of the 1970s. It may be seen that both the way Mezirow's own view developed during this time, as well as the lively scholarly discussion it has stimulated, has validated the basic ideas of the theory, while addressing a wide variety of associated questions and the theory's relations to other theories (see e.g. Illeris, 2009; Merriam, 2008; Mezirow, 1992; 1994a; 1994b; 1997; 2004; 2006; 2009; Mezirow & Associates, 1990; 2000; Taylor, 2007). Likewise, Damasio's (1994; 1999; 2003; 2010) recent neurological theorizations have been widely used and applied across

the disciplines, such as adult learning (Illeris, 2005; 2007), psychotherapy (see Greenberg & Paivio, 2003) and biology (see Wilson 1998). Finally, Clausewitz's (1989) position on friction was originally presented in the early 19th century, and it is still a topical issue in the discussions on the art of war (see e.g. Holmes, 2007; Jobbágy, 2008; Mälkki, 2010; Watts, 2004; Willmot & Barrett, 2010). Thus each of these perspectives may be considered as a scholarly approved theoretical view, and thus a valid starting point or material for the development of a theory.

Theory building based on earlier theories

In addition to the above considerations, my decision to build a theory based on analyzing earlier theories stemmed from my perception of the prevailing research on reflection. As mentioned in Chapter 1, the research on reflection may be seen to involve problems on several different levels that are linked directly to insufficiently explicated connections to the theoretical base. More specifically, many empirical studies on reflection have received criticism because they do not explain their presuppositions in terms of theory and methodology (see Bleakley, 1999; Fisher, 2003; Hatton & Smith, 1995; Kreber, 2004; McAlpine et al., 1999; Procee, 2006). Furthermore, the empirical studies based explicitly on Mezirow's theory of transformative learning have not brought their results into discussion with the theory, so as to refine and develop the theory further, although the results are in some cases inconsistent with the theory (see Mezirow, 2007). Finally, within the sphere of transformative learning, new theoretical perspectives have been presented as a response to the criticism that Mezirow's theory has received (see Taylor, 2007). Nevertheless, the conceptual connections between Mezirow's theory and the new theories have not been considered. For this reason, I decided to carry out a conceptual analysis of Mezirow's theory as the basis for my own elaborations. This enabled me to develop the theory while maintaining conceptual connections to Mezirow's theory. In the later phases of analysis, I utilized Damasio's theory as a complementary theory, and, although playing a more marginal role, the view of Clausewitz, both of which offered an understanding of the issues relevant for my research question but not considered within Mezirow's theory. These complementary theories were at first also analyzed on their own, in order to explicitly reconstruct the elements that I used in the later phases of theory building.

By basing the theoretical developments on the analyses of previous theories, I could be explicit in terms of the theoretical roots of the constructed conceptualization. Nonetheless, the firm connections of a developed theory to the earlier theories may, on the other hand, be seen to raise questions concerning the discreteness of a theory. Discreteness denotes the extent to which the new theorization refers to a phenomenon that is not susceptible to explanation through any other theory (Brookfield, 1992; Whetten, 1989). As discussed previously, in selecting the base theory and the complementary theories, I examined their discreteness and scholarly approved status. In addition, utilizing theories as departure points

involves risks in terms of the discreteness of my own theoretical developments. As Malinen (2000) points out, the earlier theory may be taken as a procrustean bed that eliminates all new insights by forcing the observations into its existing form. This risk associated with theory-driven research may be analogous to the problem of the method being “too strong,” forcing the data to resemble the method rather than the method enabling the research to offer new understanding concerning the data (Varto, 2011). Therefore I considered it to be important that while having recourse to the understanding of reflection in the earlier research, I would also attempt to remain sensitive to the other aspects of the phenomenon and to maintain a critical attitude toward departure points. In other words, I considered it important not only to use the previous theory for further applications, but also that the theory itself should remain under constant questioning and reassessment in light of the data and new analyses (see also Mezirow, 1991).

For example, using Mezirow’s theory as the basis for further developments was not a straightforward application of the theory. Namely, based on the conceptual analysis, I perceived that the theory involves a conceptual tension between reflection and meaning perspective, which are the core concepts of the theory. Mezirow himself had not, however, recognized or focused on this conceptual issue that, to some extent, may be seen as a problem in terms of the internal coherence of the theory (see Whetten, 1989). Based on my analysis, I interpreted this conceptual dilemma to be an indication of the challenges concerning reflection. In later phases, one objective was to conduct an in-depth analysis of this dilemma, by relying upon Mezirow’s conceptualizations of the concepts of reflection and meaning perspective. Another objective was to solve this conceptual problem by examining in detail the interconnections between the concepts to arrive at a more thorough conceptualization of the nature of reflection and the challenges of bringing it about, issues that were not addressed in Mezirow’s theory. In other words, I both applied Mezirow’s conceptualization and attempted to remedy both its internal inconsistencies as well as its limitations in terms of my research question. Likewise, in the analyses of the complementary theories, following rational reconstruction (see Davia, 1998; Habermas, 1979; Rorty, 1984) I reconstructed both the fruitful and the limited aspects of the theories from the viewpoint of my research question. Thus I did not take the previous theories for granted, but instead aimed to utilize them by being theoretically sensitive and open to both their potential strengths and weaknesses in terms of my research question.

Furthermore, to determine the working methods in theory development, I considered it important to aim for explicitly considered conceptual connections and to leave visible the footprints of the theory-building process. For example, as is shown in Study III, the process of analysis and the basis for each significant interpretation are explained. Moreover, in terms of the empirical analyses in Studies I and II, I regarded it important to conduct the analyses in terms of the previously well-established theorizations on reflection. Only during the later phases, the results of these studies were brought into dialogue with my own theoretical

developments. As a consequence, the way in which I constructed my theory was as transparent as possible.

On the one hand, this method of working made it easier for me to reflect on the internal coherence during the research, which is the coherence of both the constructed conceptualization and the research process (Trigg, 2001; Whetten, 1989). On the other hand, this may be seen to invite criticism and comments, not only in terms of the relevance of the final results, but also in terms of the process and the ingredients of the results. According to Brookfield (1992), the credibility of any research may only be formulated through wide exposure to academic debate concerning its proponents and through being open to further elaborations in response to critique and new research. It was therefore important for me to aim for explicitness in terms of the conceptual relations of the conceptualization and of the ways it is based on earlier theories.

In addition, the method of rational reconstruction may be seen to entail further questions in terms of the methodological soundness of the research. In rational reconstruction, the orientation to the analysis was external to the theories themselves. In essence, the reconstruction should preserve the core idea of the base theory while being applied in a justified manner to an external viewpoint (see Habermas, 1979; Peltonen, 2009). The validity of the reconstruction may be seen to be formed in the relation between a thorough grasp of the theory and its application to the chosen external viewpoint. Thus, although rational reconstruction enables more flexibility in interpretation by comparison, for example, to historical reconstruction, this is not to say that the ideas of the theory could be extricated from their original meaning (see Davia, 1998; Leiviskä, 2011; Peltonen, 2009).

Utilizing more than one theory

The question of eclecticism is often raised in terms of the theoretical efforts that have incorporated more than one theory or theoretical tradition in theory building. In my view, it is possible to utilize more than one theory in theory building in a justified manner, and in some cases, this may even be necessary in order to reach new phenomena or to understand the familiar phenomena more comprehensively. Nonetheless, the validity of this is not automatic, but requires a sensitivity that is both methodological, theoretical and content-specific, as well as careful justifications and explicit conceptual relations in terms of the new theorization (see also Trigg, 2001).

In my view, in order to conceptualize the kind of phenomenon not sufficiently considered by any previous theory, a clear differentiation should be made between an aim of combining the theories themselves – as if they could simply be merged together – from the aim of considering the given phenomenon through different theoretical lenses. Although I am utilizing different theories together, I do not assume that these theories may be combined as such, since they involve elements that are more or less incompatible. Rather, the essential question is to aim

to explore and conceptualize a phenomenon that is under-theorized within previous theories: On one hand, the nature of the phenomenon may be such that the previous theories merely do not consider it. On the other hand, some phenomena may be implied in previous theories by their argumentation, but are not explicitly considered and raised to the foreground, to be examined. Thus, the focus is on considering the phenomenon, in which it is possible to utilize together the understanding that is opened up by the relevant theories. Consequently, the essential question is whether these theories together stimulate and enable a conceptualization of the kind of phenomenon that is relevant to the field in question. A further point is that the new conceptualization would also possibly place the existing knowledge in a new light as well (see also Trigg, 2001; Wilson, 1998).

In my case, one of the main reasons for deciding to adopt another theory besides that of Mezirow had to do with the emphases of the research on Mezirow's theory: Within the scholarly discussions on transformative learning theory, there were continuous calls for further understanding in terms of the emotional dimension (see Taylor, 2007). Despite these, the theory had not been further elaborated in terms of this dimension. In essence, the scholarly discussion and argumentation concerning Mezirow's theory had stayed within the conceptual frame that Mezirow had created, and other dimensions of the concepts had not been analyzed further. Limiting the discussion in this way may be seen to entail a risk that certain descriptions of phenomenon become taken for granted while other important features of the phenomenon are not studied (see McAlpine et al., 2006; Mezirow, 1991; Varto, 1992; Whetten, 1989). From this perspective, it appeared that remaining within the prevailing lines of research would not create possibilities for deepening the understanding of reflection in terms of the emotional dimension.

Choosing Damasio as a complementary theory in terms of this emotional dimension was not, however, an unambiguous choice. Another, perhaps more natural choice would have been to utilize the literature that Mezirow himself has used with reference to these issues, i.e. the psychotherapeutical literature. However, as these are in general more concerned with applied than basic research, and also as many of the more recent studies themselves base their analyses on for example Damasio's work (see e.g. Greenberg & Paivio, 2003), I considered it more sensible to use Damasio's theory instead. Damasio's work focuses on the basic nature and dynamic of the phenomena as such, without focusing on applications. Similarly, my analysis of the challenges of reflection is not about promoting reflection for example in adult education. Rather, I aim to depict the central dynamic of the prerequisites of reflection without going more deeply into how this dynamic manifests itself in different ways in different educational practices. I assume it is possible that no matter how much reflection may be facilitated, people may also reflect by themselves. Furthermore, although in educational settings the important factors are both the facilitator's role as well as the relationships within the class, ultimately it is the learner who must do the mental work. That is why I regarded it important to examine the nature of reflection on the level of abstraction that

allows a clarification of the basic processes, which then manifest themselves differently according to the contexts. From this viewpoint, Damasio's basic research appeared the most relevant for my research.

Although utilizing these two theories together appeared to be tentatively beneficial, I considered it to require careful consideration in any case, both in terms of their similarities and differences regarding the substance, and the consequences of the differing methodological, epistemological and ontological presuppositions that these theories inevitably involved. As mentioned previously, before utilizing these two theories together, they were both analyzed for their internal coherence and conceptual relations. That is, they were not taken as the building blocks of my theorization as such, but only after careful analysis. Moreover, after reconstructing the productive as well as limited aspects of the theories in terms of my research question, I conducted a parallel analysis of the theories, in which I aimed to locate both the coherent and incoherent aspects among the theories through comparing them. The incoherent aspects were then analyzed from the viewpoint of my research, in order to assess their relevance in terms of my conceptualization. Some of these aspects turned out to require further analysis, in order to understand these aspects in more detail, which enabled me to consider the nature of the incoherence and, in some cases, to construct argumentation that in fact enabled solving the discrepancies among them.

One example of the incoherent ontological presuppositions that required further attention and re-interpretation was the way particular views of Damasio may be seen as reductionist to a degree. In some instances, Damasio (2003) emphasizes the significance of the biological base as the sole departure point, instead of considering how it, too, may be affected by the cultural level. In fact, concerning both the nature of emotions and consciousness, Damasio's (1994; 1999; 2003) theory appeared to involve a significant limitation in terms of my research question that required re-interpretation¹⁵. In later phases, further conceptualization of this issue turned out to be an important element in my theorization.

In this sense, although I rely on Damasio's conceptualization to a certain extent, my argumentation does not embody the same tone of reductionism as is visible in Damasio's theory, in terms of emphasis on the biological perspective. In fact, my position is that in addition to the biological viewpoint, the socially affected phenomena require their own kind of understanding that is sensitive to the nature of social phenomena (cf. Wilson, 1998). In other words, locating the genetic basis for a social phenomenon does not offer sufficient understanding to enable working with the phenomenon in practice (see also Brookfield, 1992; Todorov, 1998; Trigg, 2001). In my view, the biological explanation of a phenomenon is a significant, although not exclusive, aspect of explaining and understanding a so-

¹⁵ For my elaborations on Damasio's ideas concerning both the nature of emotions and consciousness, see Study III.

cial phenomenon. Even so, this dimension is not often acknowledged within the research on adult learning.

5.3 Characterizing the theorization

After considering the ingredients of the theorization that has been constructed within this doctoral dissertation in the previous sections, this section offers an overall picture of the theorization, to characterize its nature and to situate it within the wider framework of academic research.

The intention of this research was to deepen the understanding of reflection from the perspective of adult learning more generally. In this sense, the examinations of reflection within the contexts of crisis were to some extent instrumental in relation to the general aim of this study. Furthermore, although I assume that deepening the understanding of the nature of adult learning (within different contexts) may ultimately support the improvement of educational practices, my primary interest within this analysis was not in facilitating reflection in educational contexts as such. In my view, facilitating reflection is not only a matter of *how* better to promote it but also *why* to promote reflection and *on what costs* (see Brookfield, 1994; Kreber, 2005; Taylor, 2000). These questions, in my opinion, need to a certain extent to be reconsidered each time in terms of the given participants, educational goals and context (see Malinen 2000). However, I assume that these considerations may be made more consciously and deliberately when there is more understanding regarding the nature of reflection and of the prerequisites entailed in the process, as well as both the positive and negative consequences that reflection may bring about (see Illeris, 2007; Peltonen, 2009; Siljander, 1988; Taylor, 2007; Weniger, 1952).

The aim of my research was therefore not normative in the sense that my main objective would be to offer guidelines or instructions for practitioners or policy-makers (see Brookfield, 1992; Malinen, 2000). Rather, my aim was descriptive, attempting to depict the nature of the phenomenon and the prerequisites of the process. On the other hand, the aim was explanatory, for by theorizing the nature and dynamics of the phenomenon, I ultimately aimed to offer explanations concerning why reflection may be difficult to bring about in practice. This explanatory aim is not to be interpreted as a straightforward cause-effect-explanation; rather, the aim is to depict how different factors contribute together to the dynamic nature of the phenomenon, in the way contextual explanations are presented within e.g. sociology. This offers a conceptual frame to consider the prerequisites and challenges of a given phenomenon (see Trigg, 2001; Whetten, 1989).

The main objective of the theory that I propose is to capture the nature of reflection while maintaining sensitivity to contextual varieties, and to how the phenomenon is affected contextually. It does not, however, aim to offer accurate predictions or ready-made answers, but rather to suggest analytical tools (see Hannus & Simola, 2010; Malinen, 2000; Whetten, 1989) in order to make visible and open

for examination the ways in which the different aspects of the phenomenon may contribute to a certain situation. In this sense, it may be seen to represent a middle-range or substantive theory that is concerned with specific areas of practice. According to Brookfield (1992, p. 83), it is unlikely that within adult education or in any social science, there would be an “all-inclusive ‘grand’ theory of education.” At the other extreme, there are several context-specific micro-theories or more specifically compilations of sets of assumptions concerning best practices. In between these two, Brookfield (1992) locates the most promising arena of theorizing in adult education, the development of middle range or substantive theories. My theorization considers a very specific joint area that is at the same time narrow in its scope, yet applicable across a range of educational activities (see also Bacharach, 1989; Malinen, 2000; Whetten, 1989).

Furthermore, in comparison to Mezirow’s theory that was used as the starting point for the theory building, my theorization may be seen as a further development on the specific issues within Mezirow’s theory. While it does not, however, consider all concepts and aspects of adult learning that are apparent in Mezirow’s theory, my attempt to formulate a theory may be seen to offer new perspectives from which to analyze the remaining aspects of Mezirow’s theory as well. As Whetten (1989) points out, a theoretical contribution is one that alters the core logic of the existing model by offering further understanding especially concerning the relationships (“How”) between constructs instead of merely adding or subtracting factors (“What”). According to Whetten (1989, p. 493), the most fruitful – while the most difficult – areas of theory development are the kinds that “challenge underlying rationales supporting the accepted theories” (“Why”). This often involves borrowing a perspective from other fields, in order to alter the metaphors and ways of thinking concerning the phenomenon (Whetten, 1989; see also Wilson, 1998). Both the “How” and “Why” –aspects of theory development may be apparent in my formulation of a theory that reconceptualizes the interrelations between the concepts of reflection, meaning perspective and disorienting dilemma in terms of Damasio’s view on emotions. In addition, the new concepts that I introduced may, in fact, be seen to support both the parsimony and comprehensiveness (see Brookfield, 1992; Malinen, 2000; Whetten, 1989) of my theorization, as they enable grasping the crucial intersections between different dimensions, thus involving a synthesis of several ideas of the previous theories.

Finally, Mezirow’s view has been seen as an indication of the constructivist orientation to learning (see Malinen, 2000). It is therefore useful to consider the theoretical developments of this research in relation to Mezirow’s constructivist departure points. In my opinion, the proposed view of emotional orientation towards the comfort zone may, to some extent, actually be viewed as compatible with the common constructivist position, as it is visible in the discussions on adult learning (see e.g. Tynjälä, 1999). Although according to my theorization, the edge-emotions are presented most prominently in the sense that they limit our rational

thinking, basically the emotional orientation is necessary for us. It enables us to understand the surrounding world and to construct understanding based on previous understanding and experiences – as the constructivist view suggests – while orienting us away from the kind of impulses that are of too much strain (see also Mezirow, 1991; 2000). Furthermore, Mezirow (1991) considers how our thinking is, through the meaning perspective, governed by the set of assumptions that have been formed through our previous experiences and shaped by our social surroundings. Thus understanding is based on using our assumptions to grasp the situations. According to Mezirow (2000, p.16), meaning perspectives “selectively shape and delimit perception, cognition, feelings, and disposition by predisposing our intentions, expectations, and purposes”. Given the previously explicated role of emotions (orienting attention to ensure the intactness or continuity of the meaning perspective by directing us towards our comfort zones), I suggest that these tendencies of our cognitive functions, realized through the meaning perspectives, are in fact supported by emotions. On the one hand, the cognitive functions support survival in terms of, for example, enabling imagination, planning and anticipation (Damasio, 1999; 2003). On the other hand, I suggest they are bound with the aim to maintain the coherence of the structures of consciousness in order to ensure survival.

5.4 Directions for future research

This research adopted an approach that utilized different methods, viewpoints and contexts in order to examine and theorize the prerequisites and challenges of reflection. As a consequence, the suggested directions for future research are varied as well. On the one hand, through this multifaceted approach, it was possible to reach an understanding of the emphases and gaps in the prevailing research on reflection. On the other hand, as this theorization incorporated a wide range of viewpoints and theories, the result is that several different directions are possible to develop further the proposed theory. This section presents both of these perspectives – suggestions for future research on reflection, and the possible development of the theory to account for the observations pertaining to reflection. These perspectives are discussed in this section.

In terms of the educational research on reflection in general, my view is that the crucial yet neglected aspects are the methodological questions. Considering that reflection has been one of the most popular concepts of education for the past twenty or thirty years (see Brookfield, 2000; Boud, Keogh & Walker, 1985; Moon, 2004), and that there is extensive scholarly discussion and research conducted on the topic, it is surprising how little discussion and debate there has been on the prerequisites for researching reflection. As was suggested by Studies I and II, interpreting the data in terms of reflection is not a straightforward endeavor. The conclusions to be drawn from researching reflection may not be black-and-white simple statements. Therefore more attention should be paid to the ways reflection

may be researched, in order to contribute to an increased understanding of the methodological issues specifically in terms of this complex phenomenon. Often within research on reflection, scholars either implicitly or explicitly have sought for quick solutions and straightforward applications of the results that could be put into practice. While agreeing with the need for these, it is my position that the necessary base for these explorations has yet to be built.

Furthermore, more communication between the theoretical, empirical and methodological perspectives might help to increase an understanding of the actualities of reflection in different spheres. Focusing on the interlinked aspects among these would enable the strengthening of the methodology of researching reflection: Understanding the nature of reflection offered by existing research could be more firmly channeled into the ways of conducting research. Moreover, communication between these three perspectives would enable the detection of gaps within prevailing research (see Leshem & Trafford, 2010) and the outlining of productive new viewpoints for further research. In addition, this would help to maintain continuous questioning and refinement (see Mezirow, 1991; Whetten, 1989) of the theories of the field, instead of the theories being left as isolated and fixed cornerstones of the field.

More specifically, the theorization may be used to examine empirically the challenges and prerequisites of reflection in the various contexts of human life. In my view, it would be important to remain open both to examining the context specific features of reflection, and to utilizing the findings of the empirical research, in order to challenge and refine the theorization. As Bacharach (1989) points out, generalizability presupposes a higher level of abstraction, which necessarily lacks in richness of detail and context-specific elaborations, and vice versa. However, I think it is important to conduct the discussion between the general and the specific, as well as between the abstract and the observable. This kind of alteration of the levels of specificity may fruitfully enrich both: it would facilitate the challenge and refinement of the theories with respect to empirical research (see also Layder, 1998), as well as the utilization of the theories and their gaps in order to stimulate rigorous trailblazing empirical research.

In addition to utilizing the communication between the general and specific perspectives, another unexploited source of new insights is the communication between different contexts. That is to say, the issues that prevail in one context may be used in order to examine issues and viewpoints in another context that one may not be able to perceive as easily without the help of the analogy from the other context. In addition, comparing the results of differing studies may also result in the detection of previously neglected issues.

Furthermore, it may be fruitful to research empirically the new ways of facilitating reflection that my theorization suggests. Exploring more deeply the practicalities of applying the proposed theory would also enable bringing the insights of the theory closer to practitioners. An important dimension of this would be to consider the ethical issues associated with the applications (see Brookfield, 1992).

In other words, regarding facilitating reflection, the focus is often on the potential pedagogical benefits that reflection may bring in its wake, whereas the crucial ethical issues are cast aside, as if the end would justify the means. On the other hand, in my opinion, the solution cannot be to stick to traditional pedagogy, with the view that it is more justified since it is familiar and chosen by many others before us. In my view, no pedagogical application is free from the requirement to consider the associated ethical questions, although in case of such an intimate topic as reflection, these questions may be seen to be more readily apparent. Furthermore, in terms of the actual message of the notion of reflection, it is also rather easy to pose to the educator the question of becoming aware of one's assumptions.

Regarding the theoretical examinations, the developed theorization may be seen to include several differing invitations for further elaborations (see Brookfield, 1992). That is to say, in addition to the most obvious research issue concerning assessing and refining the theorization (see Brookfield, 1992), the different dimensions of the theory may be seen to call for more specific further explorations. To summarize, the following five issues may be seen as the core directions for further theoretical elaborations:

1. As the developed theory stems directly from certain ideas of Mezirow and develops them further, it would be important to consider all of Mezirow's theory in terms of my new interpretations. This would enable utilizing the established conceptual links to explore further themes considered by Mezirow (1991; 2000).

2. The considerations in establishing my theory on the social dimension could be seen as "skeleton arguments" (see Malinen, 2000) needing further examination. For example, an important contribution would be to examine, challenge and refine these arguments in the light of the theorizations and empirical research, by focusing specifically on the social dimension. For example, several theories within the field of sociology emphasize the need to become aware of the prevailing social givens (see Brookfield, 2000; 2005). Bringing together these perspectives with the added insights of this research may be useful for both, as they may be seen to involve considerations on the cultural and social dimensions, whereas my theory would involve considerations concerning the nature of reflection especially in terms of the cognitive and emotional dimensions. More understanding is needed concerning how different cultural assumptions contribute to learning environments or to the experiences, interpretations and learning processes of both teachers and learners (see also Brookfield, 2005; 2006; Jarvis, 2009; Illeris, 2007). Namely, often both learners and teachers are assumed to be exclusively rational, and learning is regarded as considering the explicit cognitive substance only.

3. Being, as it is, based on Mezirow's theory of transformative learning, my theory represents an approach that considers the possibilities of contradictions and unpleasant experiences as potential departure points for learning. Apparently, quite a different approach is indicated by positive psychology (see e.g. Johnson, Waugh & Fredrickson, 2010; Kok, Catalino & Fredrickson, 2008), emphasizing the effect of positive experiences and emotions in enhancing learning and sur-

passing one's boundaries. Communication between these two perspectives may be fruitful in future research. In the end, they may be closer to each other than what they appear: for example, the relevance of a positive atmosphere, safe relationships and the supportive role the educator is clearly acknowledged in the work of Mezirow (1991) and many others (e.g. Brookfield, 2006; Cranton, 2006; Malinen, 2000), including my theory. However, theories that consider contradictions as seeds for learning often do not extensively take into account the positive aspects. Respectively, the views of positive psychology (e.g. Kok *et al.*, 2008) are often limited in that they regard unpleasant emotions as a factor merely impeding learning. As is evident based on the present study, this is not a black-or-white issue. Unpleasant emotions may also have positive consequences in terms of learning, which may, in fact, contribute to one's personal experience of these challenges altogether. Furthermore, if one is to view learning as it appears in everyday life, negative occurrences should not be left unconsidered, as they cannot be excluded from life either. Therefore, a synthesis of these two perspectives might prove beneficial in revealing relevant areas of inquiry, so as to explore reflection and learning as openly and thoroughly as possible.

4. Although my theory centers on considering the emotional dimension of reflection, it embodies a very parsimonious and simple understanding of emotions as such. As the basic connections between reflection and emotions have now been constructed, these conceptual connections may be utilized fairly easily to consider the emotional dimension in more detail. For example, the description of edge-emotions emphasizes their functional role rather than offering a carefully constructed argument of what these emotions actually entail, and how they relate to the different kinds and levels of emotions that are discussed, for example, in the literature on psychotherapy (see Greenberg & Paivio, 2003). These questions may serve as a focus that would be productive for further research.

5. Damasio's neurobiologically based view on emotions and consciousness was used as one of the building blocks of the theory. Although I did not consider the neurological insights *per se*, but rather utilized Damasio's conclusions that contribute to the scholarly discussions in terms of more general psychology and philosophy, my interpretations and elaborations of Damasio's ideas may also be seen as offering relevant hypotheses for further neurological research. This would be especially intriguing in terms of the emotional protection of the structures of consciousness, and the manifestation of this in association with reflection. This theme would be relevant both in terms of Damasio's (1994; 1999; 2003; 2010) own theory and the research on reflection. Furthermore, in my view, this issue may best be studied empirically as cross-disciplinary research among neurologists, psychologists and educational researchers.

Finally, at the general level, based on this study, it is evident that future studies would benefit from focusing more on the perspective of the prerequisites and actualities of learning, i.e. why the intended learning does not always occur (see Illeris, 2007), and what other dimensions to learning there are. That is to say, it

is not enough to state whether the given ideal has been attained, or whether the educational effort has been successful. Rather, more understanding is needed of the processes that actually take place in these instances at both the individual and social level, including the role of the educator.

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